SEPTEMBER 1954

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FIFTY-NINTH YEAR · NATIONAL FIRE PROTECTION ASSOCIATION

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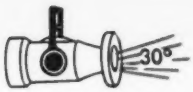
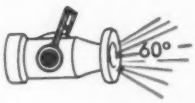
"Let's Grow Up Not Burn Up" (see page 7)

Automatic Shut-off —
Water pressure keeps it shut

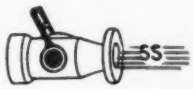
Effective long-distance Fog. Saturating indirect waterfog application

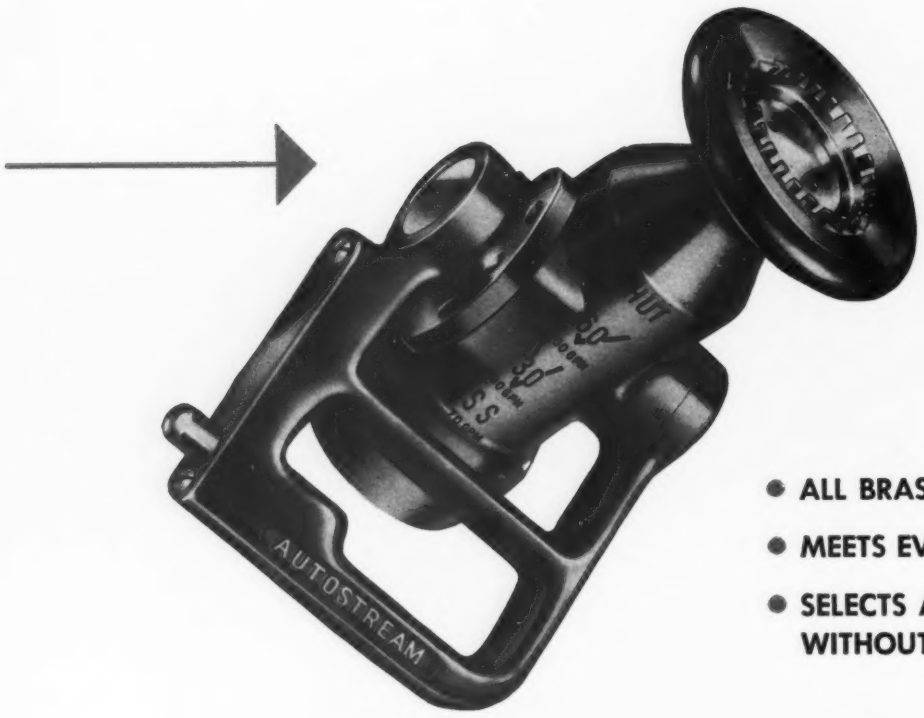


Full, Solid Fog-Pattern, personnel protection, instant smothering



Perfect straight stream.
Non-Feathering, Far-reaching





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- **MEETS EVERY FIRE PROBLEM**
- **SELECTS ANY STREAM WITHOUT TWISTING**

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★ **NEVER NEEDS LUBRICATION** — Works easily under all pressures. No back-lash.

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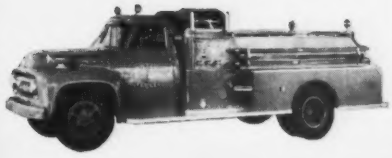
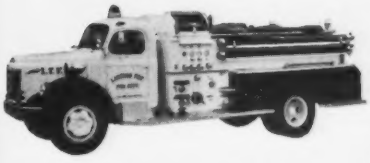


GRAND TRAVERSE COUNTY, MICHIGAN

ROCHESTER, MINNESOTA



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Can be mounted on most standard truck chassis

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protects its property *Automatically*....
gets better FIRE and BURGLARY PROTECTION and

SAVES $3,000 A YEAR

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ADT

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CHAMPION

200 HORSEPOWER GMC

750 GALLON UNDERWRITER PERFORMANCE PLUS HIGH PRESSURE FOG

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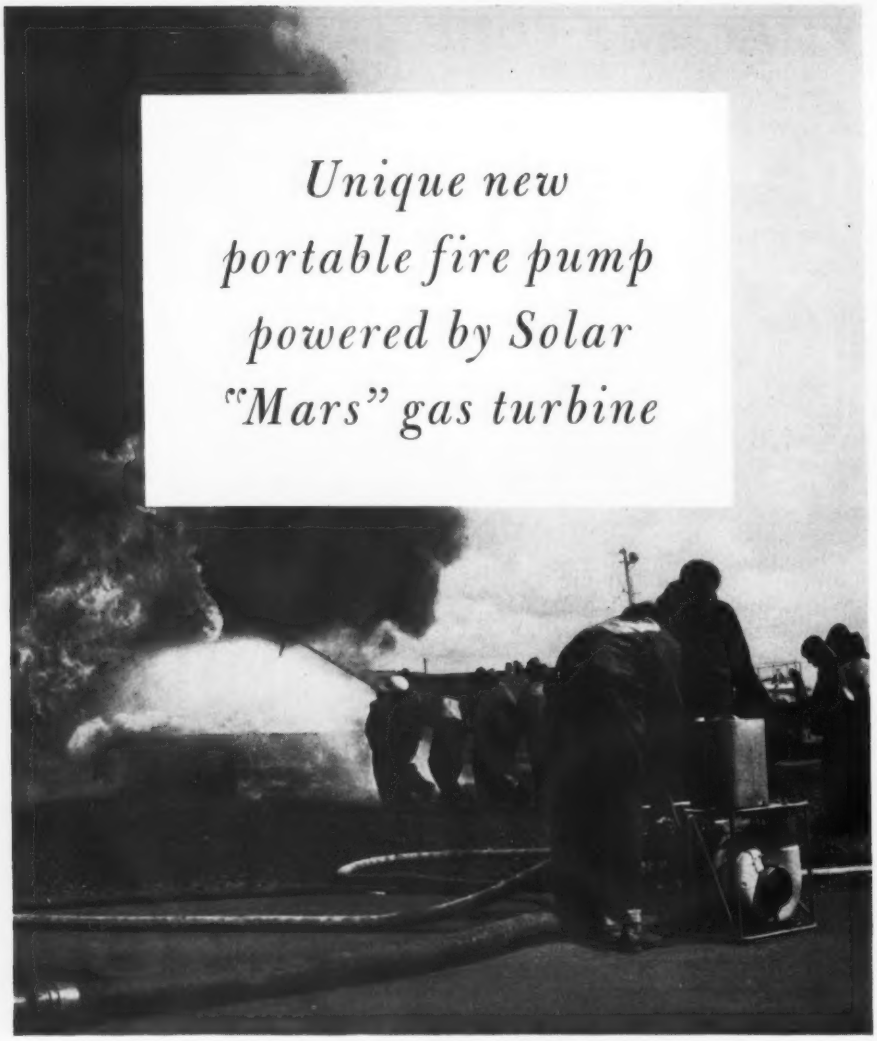

Solar pump on test at Navy Firefighting School

A UNIQUE NEW portable pump for fire fighting has been developed by Solar for the U.S. Navy Bureau of Ships. It is powered by the Solar "Mars" gas turbine engine, the sensational engine that drives the vital auxiliary generator in the Douglas "Globemaster," world's largest cargo plane. The "Mars" engine weighs less than 100 pounds, is smaller than a two-foot cube, and produces 50 hp using gasoline, diesel oil or kerosene.

Powered by this engine, the pump delivers 500 gallons per minute at a pressure of 100 pounds per square inch with a 16 foot suction lift. Dry weight, excluding gas tanks and hoses, is only 175 pounds. The unit is hand started and ready for full load in 15 seconds. It can pump its own weight in water in 2.5 seconds.

Fire chiefs and those who know fires, both here and abroad, have tested this unit and given it their endorsement. It is not yet generally available because all current production of Solar gas turbines is going for military uses. However, production for commercial applications is expected in the near future. May we have your inquiry.

SOLAR
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DES MOINES

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Solar specializes in the manufacture of precision products from alloys and special metals for severe service. Solar's experience since 1927 is unduplicated in this field. Solar skills and facilities range from research, design and development through to mass production. Wherever heat, corrosion or specifications are problems, Solar can help you solve them.

PLANTS. *In San Diego (Photo above) and Des Moines. A total of 1,400,900 sq. ft. floor space. Approximately 5,000 employees. Annual sales over $65,000,000.*

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SERVICES. *Research, design, development, tooling and production engineering staffs. Experienced with all alloy steels, stainless alloys, super alloys, and Titanium and its alloys. Government source inspection and Solar quality control meet rigid aircraft and commercial standards.*

CONTRACT PRODUCTION

Current orders include aircraft engine and airframe parts, alloy castings, pneumatic ducting, atomic energy components. Customers include some of the most honored names among aircraft and industrial manufacturers in U.S. and Europe.

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Gas Turbines. *Solar "Mars" 50 hp unit for auxiliary generator sets, portable fire pumps: Solar "Jupiter" 500 hp engines in variable and constant speed models.*

Ceramic Coatings. *"Solaramic"® is the Solar trade mark for a family of coatings that protects metals from heat, corrosion, galling and abrasion.*

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FURTHER INFORMATION

Your inquiry regarding any Solar service or facility will receive courteous attention. Address Solar Aircraft Company, Department A-15, San Diego 12, Calif.

Firemen

Volume 21 Number 9

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PAUL R. LYONS, ASSOCIATE EDITOR
HENRY S. GERE, ADVERTISING MANAGER

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NATIONAL FIRE PROTECTION ASSOCIATION

A VOLUNTARY NON-PROFIT ORGANIZATION
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"Timely" TV Show

On July 25 the Franklin Square and Munson Volunteer Fire Department, Franklin Square, New York, played a principal role in the coast-to-coast TV show "Man Behind the Badge," produced by Prockter Television Enterprises. The half-hour story was developed around the theme of malicious false alarms and what they meant to that particular fire department. Towards the climax of the story a member of the fire department was seriously injured while responding to one of the false alarms, but since TV-shows must have a happy ending the person responsible for the alarms was soon trapped after a "stakeout" by the volunteers.

Such television shows must be carefully prepared and the writers of "The Man Behind the Badge" several months ago contacted the NFPA for background information. For realism, they wanted to refer to a particular recent incident where one or more fire fighters had been killed when responding to a false alarm in some fire department in the vicinity of New York City or Southern New England.

"Timing" is a much desired element of television, radio and news stories. Unfortunately, the timing of this show could not have been much better, but apparently the televised admonitions of the dangers of false alarms did not reach all persons in New York City.

Less than a week later, on July 31, the Saturday following the show, two New York City firemen were killed while responding to a false alarm when Hook and Ladder Truck 136 collided with Rescue Squad 4. In addition to the two dead victims, eight other fire fighters were seriously injured. The incident brought immediate reaction from fire service members in the city. The Uniformed Firemen's Association and the Uniformed Fire Officers' Association jointly offered a $500 reward for the arrest and conviction of the person responsible for the false alarm. New York City Fire Commissioner Edward F. Cavanagh, Jr., denounced the responsible person as a "potential murderer. As a result of an investigation by City Fire Marshal Martin Scott a man is under arrest for this crime.

According to a New York *Times* editorial, during the year 1953, 15,000 malicious false alarms occurred in New York City or a total of 19 out of every 100 alarms received. The same ratio has held constant during the past three years. The editorial also stated that only one out of every 100 persons pulling such alarms now gets arrested.

Sending false alarms is a violation of New York State's penal law and is punishable by a fine up to $500 and one year in jail. Fire fighters throughout the country will, perhaps, agree that such punishment is extremely light, particularly in this recent incident involving the injury or death of ten of the "men behind the badge" who expose themselves to danger every time fire apparatus responds to an alarm.

Cover Picture

The rescue scene shown on this month's cover is typical of incidents which inspired the selection of this year's NFPA Fire Prevention Week slogan, "Let's Grow Up Not Burn Up." (See page 8.) On June 12, Chicago, Illinois, fire fighters responded to an alarm for a dwelling fire on West Erie Street. During the action which followed, Fireman Joseph R. Deitz of Hook and Ladder No. 19 rescued a two-months-old baby. The cover picture shows him placing the child into an ambulance.

The Fire Prevention Week slogan and illustrations (see page 31), imply not only an urgent warning for fire safety, but also the leadership which fire fighters have traditionally provided to children. Nearly 30 percent of the fire deaths which occur each year involve children under 15 years of age. The rescue by Fireman Dietz is only one of many in which fire fighters have participated throughout the year.

Perhaps no other phase of fireground action demonstrates a fire fighter's aggressiveness and spirit of self-sacrifice. Teaching children fire safety is helped by the contact which fire fighters have with the young during school and "house-to-house" fire prevention programs.

When a child's life is threatened by fire the fire fighter is impelled to self-sacrifice. In many instances, not even the risk of death will deter fire fighters from attempting rescue. (*Photo by Stephen Lasker, affiliated with NBC-TV, Chicago.*)

The Dangerous Months Follow

Fire Prevention Week - October 3-9, 1954

(See Back Cover)

BECAUSE of past experience, fire service members expect the coming Fall and Winter months to bring the annual "cold weather" surge in fire deaths. They anticipate the familiar but tragic incidents of two, four, six or more members of some families dying by fire on wintry nights before rescue can be made.

Past fire experience thus provides a compelling reason for scheduling Fire Prevention Week (October 3–9) just before the cold weather begins. The fire death toll of this hazardous season has inspired many excellent fire prevention campaigns, together with effective instructional aids and literature for teaching the fundamentals of fire safety to the general public.

Realizing that most fire deaths in dwellings occur because of inattentiveness or lack of knowledge of fire safety practices, many fire departments throughout the United States and Canada are developing effective routines for dwelling inspection campaigns, generally beginning in or shortly after Fire Prevention Week and continuing through the winter season.

In some communities residents are just beginning to realize the efficiency and importance of fire department communications, because radio-equipped apparatus is moving through each neighborhood with the inspecting fire fighters. New York City (see June, 1954, FIREMEN) and Boston, Massachusetts, were two of the largest municipal fire departments which recently began systematic house-to-house and block-by-block inspections with radio-equipped apparatus.

Convincing evidence of what such campaigns can accomplish appears in a recent report to the NFPA by Acting Chief B. B. Wilkinson of the Phoenix, Arizona, Fire Department. Members of that department have been conducting dwelling inspections since 1951. In addition to pointing out hazards and suggesting corrections, the firemen leave a red fire ordinance card which outlines when and under what conditions residents may burn trash. Each home owner is also given an attractive decalcomania to place on the telephone. The "decal" shows the telephone numbers of both the fire department and the police department. (There are several rural fire departments beyond the Phoenix City limits which are listed in the city telephone directory, and many residents have mistakenly called these outlying departments when emergencies demanded the services of the Phoenix Fire Department.)

Since 1950, the year before the inspection program was begun, the population of Phoenix has increased from 106,050 to 140,000 in 1954. Yet, each year, the number of home fires per 1,000 population has decreased in this sequence: 5.28; 4.37; 3.85; and 3.73. The last three encompass the period when home inspections were being conducted.

Special efforts must be directed by fire departments to contacting management and personnel in nursing homes (see page 14), hospitals and industries. Each of these types of occupancies is also subject to the basic fire hazards and fire safety abuses which are brought about during cold weather months. Responsible supervisory personnel need to be informed of fundamental dangers, such as faulty or makeshift heating appliances, improper storage practices, and ordinary rubbish accumulation. They also need information on how and why to establish effective fire exit drills.

Chief F. C. Kelly of the Jacksonville, Florida, Fire Department has his personnel visiting all nursing homes, hospitals, warehouses, stores and industries, to develop effective evacuation practices. The fire fighters are encouraging management personnel of these occupancies to adopt a complete "fire plan," which includes an evacuation plan recommended by the fire department, and a lecture on fire extinguishers to all employees. Industries and warehouses are being encouraged to develop plant fire brigades and Chief Kelly is distributing a "fire safety card" to brigade personnel who participate in a course of instruction on the handling and use of auxiliary fire fighting equipment.

As pointed out in the July, 1953, FIREMEN, fire exit drills must also be stressed during the early months of the school year. Members of the Eugene, Oregon, Fire Department, for example, witnessed one of their major fire prevention accomplishments last February when a flash fire spread through a grade school and the disciplined drill procedure proved invaluable for the safety of the 468 children.

In Naperville, Illinois, the fire department last year produced a color film as part of the public relations program. In addition to seeking cooperation of civic clubs and organizations, businessmen and industries, fire department members requested the school children to ask questions and make suggestions for the film's comment. This simple request brought more than 550 responses from the children. When the 21-minute film was completed, members of the department showed it to all the schools and civic clubs in Naperville. In that month there were only 10 fire alarms in the municipality, compared with 33 alarms for the same month in the previous year.

Thousands of fire departments will be starting new campaigns with the coming of Fire Prevention Week. Many will attempt to gain international recognition for their efforts by participating in the NFPA Fire Prevention Week Contest. (Entry blanks for the Contest were included with the August issue of FIREMEN. Be sure that your department submits its entry before November 30, 1954 — *Ed.*)

While the awards are greatly desired and cherished, all participants are aware that the purpose of the Contest is to save lives and property from fire. The dangerous cold weather season for fire deaths demands sincere and prolonged fire prevention efforts by all members of the fire service.

Training Fire Fighters

An Outline of Suggested Instructional Procedures

By Warren Y. Kimball

MOST fire department officers and many other fire fighters find it necessary and desirable to help train other firemen or other persons in the work of fighting fires and fire prevention. We present here a brief outline on the art of instruction that may prove helpful.

In most states more detailed assistance can be obtained from the state firemen training program or appropriate state vocational training agency. This article is intended merely to serve as a reminder that training should be systematic and should follow accepted teaching techniques. In many cities a large number of fire department officers as well as fire instructors have completed a fire instructor training course.

In general, there are three broad fields of firemen's training:

1. Training and instruction for fire fighters individually and in company units.
2. Training for officers.
3. Training for instructors who are to teach fire subjects.

In teaching there are three general educational procedures that may be employed as follows:

1. INFORMING — This method is used particularly to tell beginners about a subject. It is especially effective with persons who know relatively little about the subject. It also may be used to give additional information to a person already qualified in the fire field.

2. INSTRUCTION — Follow recognized or accepted sequences or procedures as outlined below. Be sure to carry the group along. Measure the learners' "doing ability." This is an important phase of the work of the fire instructor in teaching fire fighters and company groups.

3. CONFERENCE — In the conference technique most of the material is drawn from the group. The instructor or other appropriate official serves as a conference leader. Some instructing may be combined with a conference as needed.

Instructional Procedures

IN ORDER to carry out instruction properly it is desirable to know the steps to be followed in logical systematic teaching. The stages of instruction are:

A. **Preparation** — This must be done by the instructor in advance. He should know the scope of the subject to be covered; the time available for the course and individual lessons; the training facilities and equipment available, the size of the class and its background of experience upon which he is to build. As far as possible, nothing should be left to chance for which adequate preparation can be made, but at the same time an effort should be made to present the subject in a spontaneous and interesting manner.

B. **Introduction** — Get the minds of the learners ready to receive. A varied approach should be employed. The opening contact with the class should arouse interest and a desire or at least a willingness to participate and learn. If the instructor is genuinely interested and enthusiastic his attitude usually is contagious.

C. **Presentation** — Set forth a logical pattern of learning. The instruction should be organized to build upon the learners' prior knowledge and experience because learning involves an association of ideas and experiences. It is best accomplished when new skills and knowledge can be associated with those already known. The presentation of information and new material should be in a sequence that is interesting and easy to follow.

D. **Practice** — After the necessary information and demonstration have been presented, the learners should perform under the supervision of instructors. Students need an opportunity to perform the job demonstrated in order to learn by participation and by repetition.

E. **Testing** — Testing is necessary to find out what the student has learned, how well the subject has been taught, and to provide an opportunity to clear up any misconceptions or misinformation. There are various forms of testing such as oral and written questions or observation of the learners' performance. The instructor should not use tricky methods, but should test against definite standards of performance or knowledge which will indicate whether the students have a "doing ability" or personal grasp of the subject.

F. **Follow-up** — A "post mortem" or review is necessary after a period of time to show how well the learner has learned and retained information and has developed ability. A frequent arrangement is to have a review of the previous instruction precede a new lesson.

NATURE has provided us with five avenues of contact with the world around us through which we obtain information necessary for learning. These we call the five senses, of sight, sound, touch, smell and taste.

Through these we bring information to our mind. In responsible persons the mind must weigh the information reported by the senses and then decide whether "I must do something about this" or "This information may be useful to me. I will remember it or file it for future use."

The man who has learned to command and direct his mind and thus make reasoned decisions based upon facts is, in general, a superior person — a mature person. This is one reason why professional people, in general, appear as the leaders of a community. They have learned something about cause and effect and how to make valid and worthwhile decisions.

It is quite generally agreed that visual sensation or sight is our most important sense avenue of learning, although sound also is extremely important. All of the senses, including at times a "sixth sense" of intuition and experience, are necessary to a good fire fighter.

Getting the Learner's Attention

TO ATTRACT attention it may be necessary only to speak to a person. The fire service has an advantage in this regard because its members attend training programs either voluntarily or under discipline. Most firemen appreciate that the information and skills to be taught are intended to improve them and the department and in general no oratory or gavel pounding by the instructor is necessary to attract attention. However, the good instructor should want to arouse interest in the topic presented. If the instructor does not consider the training important, his apathy will soon communicate to the class.

In the fire service we should not have to appeal to the class for inter-

est or action. The learners answered the appeal when they chose to affiliate with the department. The instructor should try to make his subject appealing in the sense of making it interesting and worthwhile so that the student's interest and enthusiasm will be stimulated to want further training. Likewise the job of securing cooperation may be nothing more than "This is official policy" or "In order to have teamwork this is how the department wants the job done."

The instructor is not haranguing a jury or giving a political talk in which he hopes to gain a favorable action. He speaks with departmental authority. To be successful, however, he must stimulate the desired action. Fire fighting involves action, team work. "Doing ability" is worth thousands of words. In this sense the seasoned fire fighter may be considered more valuable than students who may have more technical information without doing ability.

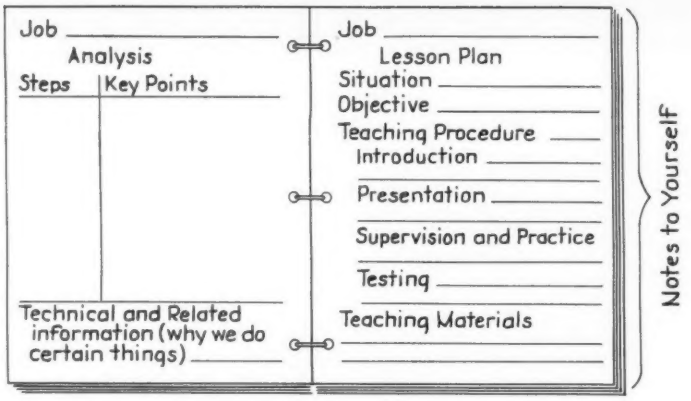
Obviously, the decision of whether the training is worthwhile must be made by the officers responsible for the training, but in presenting the subject for the first time the instructor should attempt to answer these questions by stating why this subject is taught by the department.

FIVE common ways of presenting information to a class are useful to the instructor. These should be used in combination and with suitable repetition. They may be supplemented by reading assignments.

1. Verbal explanation — talking.
2. Illustrating with pictures, objects and other visual aids.
3. Demonstrating by actually showing how the job is done or how the equipment is used.
4. Directing the students or class in doing a job.
5. Questioning to bring out ideas or related information and to see how much individuals have learned.

Here are some common forms in which we find teaching aids or materials:

1. The spoken word following a teaching outline.
2. Printed or written word (usually prepared for use outside of class).
3. Graphic and pictorial material, sometimes called visual aids.
4. Models made to scale (substitutions in miniature).
5. Equipment which will be used in practice such as pumpers, hose, ladders.



Typical Fire Instructor's Notebook

TO PREPARE to teach a subject to a group of firemen, let us return to our outline of stages of instruction. Our first step is preparation. We should make an analysis or inventory of the job. From that we can develop a lesson plan. We are merely getting ready to teach. We must make sure that the situation justifies teaching and must determine the objective of the lesson so as to set a goal for the class.

A helpful tool in preparing a lesson will be our personal notebook of job analysis and lesson plans. Under the job analysis we list the steps necessary in doing the job successfully. Beside these we list the key points to stress. On the opposite page we write out the lesson plan that we intend to use. (See illustration.)

In making an analysis of the job to be taught, we must keep our sights on the bull's-eye of what a man must know in order to be able to do the job. This helps us to avoid scattering our shots and wasting the time of the class on material not directly related to the subject under consideration.

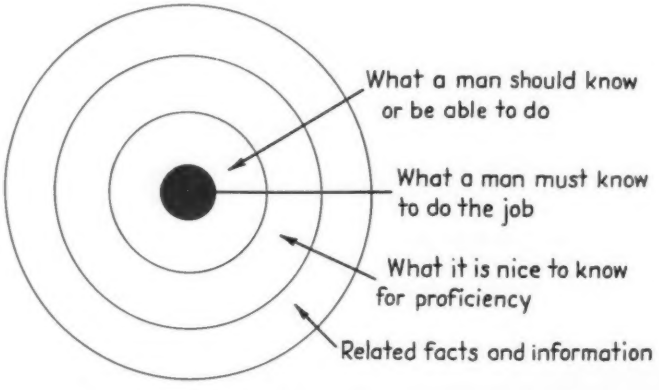
Having developed a lesson plan and assembled the various teaching aids or materials we intend to use such as models and graphic materials, and having made arrangements whereby the class can meet in reasonable comfort and privacy, we should be ready to teach.

It is important to know all that we possibly can about the members of the class, their background and abilities. Our introduction should not only be designed to create interest but should answer the question of each learner as to "why should this information be of interest or value to me?"

THE presentation of the subject will follow the lesson plan, using various devices previously outlined but the good instructor's attention is centered on the learner, not just

JOB ANALYSIS TARGET

(Teaching Steps and Key Points)


What a man should know or be able to do
What a man must know to do the job
What it is nice to know for proficiency
Related facts and information

(Start from center and work outward)

on what he wants to teach. The progress of the class is not measured in information given out but in the ability of the class members. It may be found that progress will be slower than anticipated at first due to lack of background knowledge making it necessary for the instructor to spend additional time on preparatory phases of instruction. Extra time may also be needed to develop teamwork. The instructor should be careful not to include too much subject matter in one lesson.

It is necessary that the learner have an open mind, eager and willing to accept new information and new methods. Any instructor knows that it is most difficult to teach a person who "knows all the answers" of is self satisfied. It is part of the instructor's job to remove the fabric of faulty and outmoded ideas. However, he must use tact and persuasion in preparing another man's mind for the learning process. When a man is unable or unwilling to learn the instructor must decide that this man is not qualified for the particular duties that go with the job of protecting life and property, and he may then suggest that the man should be assigned elsewhere.

MEMORY is something like perspective, in which things seem to get much smaller as they recede in the distance. It has well been said that "we remember *best* those things which we experienced most recently." Things that seem all-important today, seem less vital tomorrow, and may be forgotten the next day as new facts and new experiences crowd into our lives.

Fire fighting is an emergency operation which frequently calls for quick decisions, but our chances of making right decisions are greatly enhanced if we base these quick decisions on prior knowledge and experience such as is gained by an inspection of the premises involved, knowledge of fire behavior, and standard operating procedures. In such cases we are not making snap decisions other than to say in effect "The time for which we were planning has arrived — we will put our plan into effect."

We should remind ourselves by constant practice and repetition of the things we must know to be proficient. There is always danger that we will neglect essential fundamentals while advancing into the area of the theoretical and the improbable. We may prepare all of our lives for some great emergency that may never arise and remain grossly inefficient in the performance of little tasks that are of daily import.

It has further been said that "we remember *longest* the things that are most stimulating," and that "we remember *best* and *longest* the things which appeal to the greatest number of senses and in which we have participated most wholeheartedly."

For most successful learning, participation is necessary in more than one avenue. That is why reading or hearing alone is not enough. Especially for fire fighters, "doing ability" must be stressed. This involves physical activity as well as mere information received visually or orally.

Teaching Methods

THERE are two philosophies of approach to teaching. There is *material centered teaching*, with attention centered on apparatus or subject matter, or material rather than the learner. The instructor is concerned with the teaching material to be covered rather than how well the activity being taught can be done. Success may be measured by how much the students can "poll-parrot" back rather than what they can do.

Equipment is important in the fire service and many classes are devoted to its use, but these classes consist of men who are to operate the equipment. The men should be the object of the instructor's attention as is the case in *learner centered teaching*, whereby the instructor seeks to create a desire to learn how to do something. The instructor builds on the students' experience, knowledge, and ability. Success is measured by how well the learners can do the job.

The instructor should be aware of questions that legitimately come into the mind of intelligent learners. Such questions might be:

Is there an advantage to me or to my organization to spend the time and effort to master this subject? There are thousands of things that it might be nice to know, but I have only one crowded lifetime and is this information or skill essential to me in my work? Is this subject likely to be useful and profitable? Will it help me to gain some other desired end such as a promotion in the department? Is this knowledge and skill likely to help save life and property or save work, time and discomfort?

Having given the instruction the next step is to test how well the training has been received. Testing of the learners' ability to retain information may be by written examination, but in training firemen the paramount question or test is "How well can he do the job." There is apparatus to be operated and equipment to be used. Can the learner use it efficiently to save lives and property?

A check list for testing the class is helpful. It shows how well each subject was received. It also indicates the efficiency of the instructor in getting the subject across to the class. It shows how well each man was able to do the job. It indicates the relative ability and receptivity of each learner, as well as the class as a whole.

Finally, because men do not stay trained, there must be constant refresher or practice sessions. In fire departments these are called "drills."

The instructor should review his material and lesson plans, making modifications to improve subsequent lessons and including new material as the classes improve in efficiency. In the case of firemen's training perhaps the best indication of how well a fireman has learned will be the smooth functioning teamwork obtained in fire ground operations.

It is important that fire department training officers be alert on the fire ground for subjects that need to be emphasized or stressed in training sessions. The fire ground is no place to conduct drills or to try to change or correct methods and evolutions, but fire ground experience will reveal the need for additional training.

NFPA No. 611-M

A Reference List for Firemen's Training

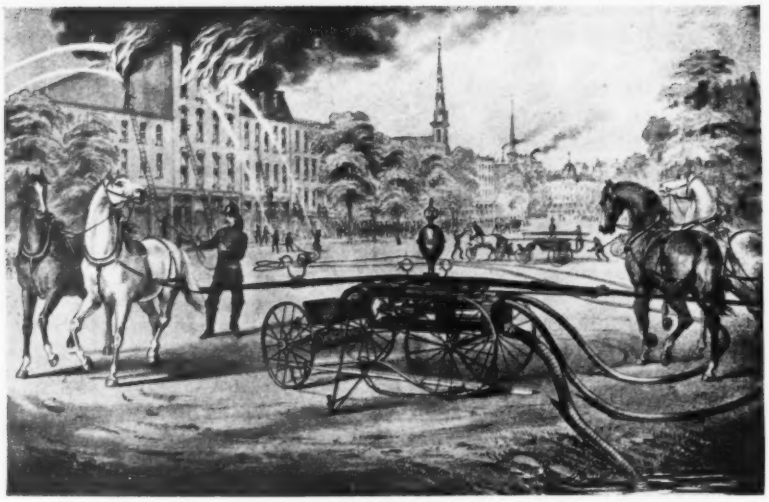
35 cents per copy

Write to

National Fire Protection Association
60 Batterymarch St., Boston 10, Mass.

Builders of Fire Apparatus *for* Four Generations

Another in a series of articles on leading manufacturers who supply apparatus and equipment to the fire service. Here's the history of the Howe Fire Apparatus Company which has been making fire apparatus for four generations.



Then . . .

Here's one of the horse-operated piston pumpers built and distributed by the Howe Company in 1875. While the routine of the pump operator's job has changed with the passing years, the importance of that job to successful fireground operations has not diminished.

TOP-NOTCH engineering and precision manufacturing are needed to make today's pumpers meet the rugged demands of fire ground performance. Yet the fire service is not immune to progress and manufacturers must be prepared to meet new design specifications of fire chiefs of tomorrow. The tremendous potential change of fire apparatus design in future years perhaps can be evaluated best by examining the 82-year history of one manufacturing concern.

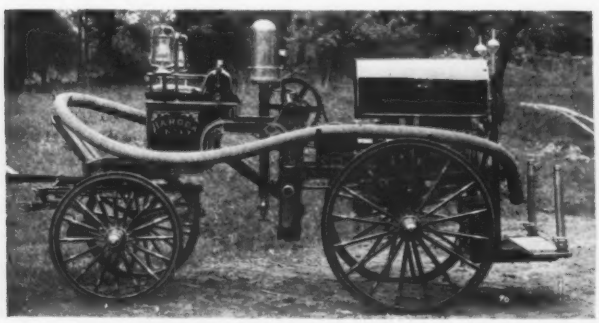
Four generations of one family have headed the Howe Fire Apparatus Company of Anderson, Indiana, since its organization in 1872. It was started by B. J. C. Howe, grandfather of Ben S. Howe, now President and General Manager of the firm. The latter's brother, L. G. Howe, is Consulting Engineer for the company. The fourth generation of the family includes Richard S. Howe, Vice President, and Ben R. Howe, Jr., present Factory Manager.

B. J. C. Howe founded his firm in the days when "first line" fire apparatus was a piston pump operated by a crew of twenty men or by the team of horses which hauled the engine to the fire. Two of these Howe pumpers are now used for historical displays. One is at the Howe factory in Anderson, while the other is exhibited at the museum of the Ford Motor Company in Greenfield Village, Dearborn, Mich.

The three sons of the founder, who eventually succeeded him in operating the business, learned early to provide service to clients. Soon after the company was established, one of them, L. M. Howe, father of the present company president, had a special job for holidays. On Decoration Day, the Fourth of July, Labor Day and other occasions for celebration, he made the rounds of all horse watering troughs in Indianapolis to make certain that the well pumps were in good shape to handle the heavy demands of equestrian traffic. At the time the Company was supplying horse-drawn pumpers to Indianapolis fire stations and also supplied many of the piston type pumps for the watering troughs.

Another duty of L. M. Howe in those days was to visit fire departments in the area which had Howe pumpers and which would be coming to Indianapolis during the holi-

(*Below*) This is the "Baroda" horse-drawn, gasoline motor-driven triplex piston pumper which was the type largely delivered by the Company from 1901 to 1914. (*Right*) The "Baroda" gets a work out. At extreme left in the straw hat is L. M. Howe, father of the present Company President. At extreme right is P. G. Howe, another son of the founder.



. . . and Now!

One of the new Howe crash trucks, now being delivered to the U. S. Coast Guard for airport fire protection, moves in on a spill fire as one fire fighter applies fog foam from the turret gun and another uses water fog from one of the two booster lines.

One of the Howe-Jeep units in operation. This is designed for a 4-man crew and carries ground ladders and a length of hard suction. In this picture the jeep has an attached trailer which carries a booster reel and other hose and supplies.

A "Defender" type pumper with a canopy type cab which can seat 5 men. This 750-gpm pumper was delivered to the North Augusta Fire Department.

days. He was obliged to see that the pumpers were in good shape for the inevitable "water battles" which took place.

THE three sons, L. M. Howe, H. R. Howe, and P. G. Howe, came into active management of the company during the period of 1893 to 1929. Drastic changes in fire apparatus motivation and design occurred during these years. When gasoline motors became practical the Howe brothers developed horse-drawn fire trucks equipped with piston and rotary type pumps driven by four and six cylinder gasoline motors. In 1904 when Henry Ford, Elwood Haynes and other pioneers in the automobile field were becoming well known, the Howe Company began to experiment with automobiles equipped with pumps and in 1908 the first Howe automobile fire pumper was ready for sale.

In the early years of the century, however, automobile type pumpers were more of a novelty than a source of efficient performance and many fire departments still had preference for horse drawn apparatus. The "Baroda" pumper, made by the company, was a horse-drawn, motor-powered pumper which found considerable acceptance from fire departments during the years 1901 to 1914.

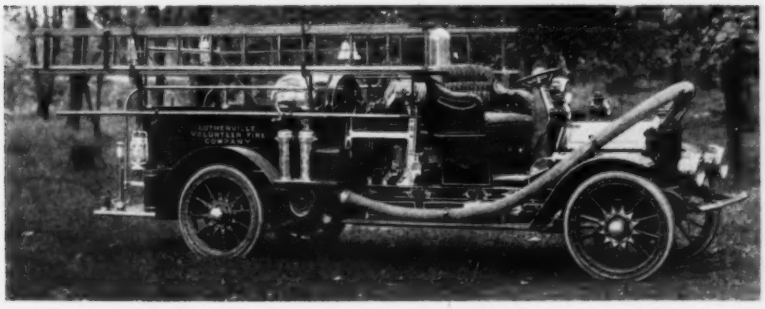
The trend of the future, however, was evident in the demand for automobile pumpers such as the one delivered to the Lutherville, Indiana, fire department in 1908. (See illustration below.)

Hastening changes in design and performance requirements of automobile fire apparatus was the development of adequate performance and acceptance tests and national specifications. The first official performance tests were conducted during the 1911 convention of the International Association of Fire Engineers in Milwaukee.

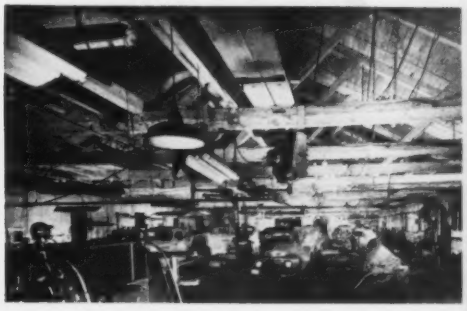
Two years later a test procedure had been developed for pumpers which consisted of 6 hours running at capacity at 120 pounds pressure, 3 hours run at one-half capacity at 200 pounds pressure, and 3 hours run at one-third capacity at 250 pounds pressure.

(*Continued on page 23*)

(*Below*) One of the first pieces of motor-driven fire apparatus was delivered to the Lutherville Volunteer Fire Company in 1908. Note the supports on the radiator which hold the long soft suction hose; the chemical reel behind the driver's seat; large flywheel and exposed mechanism of piston pump in the center of the chassis; chain drive at right of rear wheels; and the playpipe on the rear step.



(*Below*) A view of the main assembly room of the Howe factory in Anderson, Indiana.



Fire Safety in Nursing Homes

From an address by Representative Howard S. Russell of the Massachusetts State Legislature, at the annual meeting of the New England Association of Fire Chiefs, June 22. Mr. Russell is a member of the NFPA Committee on Farm Fire Protection and a member of the Massachusetts General Court Legislative Commission on Fire Safety in Homes and Institutions for the Aged.

FIRE chiefs have few problems more difficult than the protection of the thousands of people who are passing their last days in the nursing, convalescent, and boarding homes for the aged, and the city and town infirmaries.

In Massachusetts, at the last count, there were 735 licensed convalescent homes, and 856 boarding homes, with an approximate total of 22,320 patients. One boarding home houses 276 patients, as many as the entire population of some of our smaller New England towns.

In addition to licensed institutions there are unlicensed "bootleg" homes and smaller homes with only two to four patients each which are outside the purview of our licensing system, our Commission was informed.

Of the people who run these boarding and nursing homes, a substantial proportion are doctors, experienced nurses and competent women. Under such management patients get adequate and sympathetic care. Another type of management is in the business purely for profit, but nevertheless may run high grade institutions.

A few owners, I am sorry to say, are completely unfit by character and disposition to care for elderly people, and their establishments are also unfit. Respectable nursing homes and public officials want to see that these improperly operated homes are cleaned up or eliminated.

Let's look at the patients. Not all of these folks are old, but their average age is 71. Some are spry and in good health and could get out of a burning building on their own. Many are senile, many are ill. Large numbers are bedridden and helpless. They cannot move in case of fire; they must be moved.

These elderly, ill and helpless folks, and the numerous attendants who care for them, become the deep concern of the local fire chief. If, in an institution with forty inmates, a patient sets his bed in flames, the fire chief is likely to be faced not only with a tough fire, but with some nasty questions as to why so many helpless people lost their lives.

If you don't think this is something to make a chief lose sleep nights, listen to these instances taken from the National Fire Protection Association records of the past eight years:

Tallman, New York, Convalescent Home, 6 dead.
Omaha Home for the Aged, 8 dead.
Republic, Michigan, Home for Aged, 3 dead.
Nicolette, West Virginia, Infirmary, 1 dead.
Harrisonville, Missouri, Home for Aged, 4 dead.
Amarillo, Texas, 10 dead.
Hoguiam, Washington, Home for Aged, 20 dead.
Hillsboro, Missouri, Nursing Home, 20 dead.
Boston, Nursing Home, 1 dead.
Warren, Pennsylvania, Nursing Home, 7 dead.
Billings, Montana, Nursing Home, 6 dead.
Largo, Florida, Nursing Home, 33 dead.

What can a fire chief do about this menace? First, he can enforce the law.

Each New England state has its own laws and regulations relating to fire safety in nursing and boarding homes. Some are well thought out and specific, like Connecticut's: some appear general and vague, and are totally inadequate for present-day conditions. If your state laws and regulations for nursing homes are not what they ought to be, that's something your state fire chiefs' club should consider promptly. The Massachusetts Fire Chiefs' Club has its representative on our State Commission on Fire Safety in Convalescent Homes, Hospitals and Institutions, on which I also serve, and the organization has been backing our Commission up fully.

You should also acquaint yourself with the tentative recommendations of the NFPA for Fire Safety For Nursing Homes. (NFPA No. 101-PR3, fifty cents per copy.)

In setting specific requirements, of course every fire chief will say "Put in sprinklers!" Boston's (Mass.) excellent fire code for convalescent homes requires sprinklers. NFPA records show almost no loss of life, and little property damage, where sprinklers were present in nursing home fires.

Nursing home operators, however, say that the amount the welfare boards are willing to pay just will not justify a capital expenditure of what one proprietor told us had been estimated by the installer to amount to $600 per patient.

(*Left*) Thirty-two patients, a nurse, and an ambulance driver died when this fire destroyed a nursing home near Largo, Florida, in March, 1953. The nearest fire station was four miles distant, but the wood frame structure had ceilings and partitions of combustible fibreboard and the building was fully involved when apparatus responded. Many of the patients were too shocked or terrified to move to safety when the fire alarm was sounded. (See April, 1953, NFPA Quarterly and May, 1953, FIREMEN.)

THIS brings us to the question "What kind of an institution is the ordinary nursing home.

Their accommodations we already know. They run from four or five to two hundred fifty persons per home. Physically, the institution is likely to be some former gentleman's mansion; an immense structure. Very likely it is balloon frame, has a mansard roof and great porches. There may be hydrant protection, but even then the home may be located where there is only six-pounds pressure in the main.

The chief physical hazards, aside from smoking, are heating plants, multifarious electrical apparatus and appliances, large vertical openings and careless housekeeping. Beyond this, there occurs crowding of beds and patients, and housing of attendants in attics.

In Massachusetts, district officers of the State Police are requiring automatic fire detection systems, and extinguishers, and exits from every room to reach the outside. These are all important safeguards. Yet in spite of the willingness of many operators to provide these improvements, there is still left much responsibility on the local fire chief.

The granting of the original license is, in most states, dependent on the fire chief's advice and approval. An occasional chief, who fears the hazards involved, clears his skirts by refusing to O.K. any nursing home license in his town. By this he may "whitewash" himself, but the result is that the old folks from his city are shunted to a rest home in some other town where the chief looks at his duty more conscientiously. These patients then become an unfair burden on that chief.

In any case the fire chief should give the proposed home a searching examination before approving the issuance of a license.

Could he get ladders up to all the windows? Has he men enough to rescue the proposed number of patients? Could he use more than one or two lines with what water is available? Are the chimney and heater in first class condition? Is the heater cut off from the rest of the building? Are the important doors self-closing? Are the halls and stairways loaded with varnish? Can the stairs be cut off economically? And — most important — are there adequate exits for bed patients?

What are the fire chief's opportunities to be helpful? Not only can he eliminate the ordinary fire hazards, but in existing homes, the chief can work out an effective evacuation plan with the owner. Put the plan on paper, with each step outlined. Organize the institution staff for the rescue job. Organize the neighbors, if necessary, also. And, of course, work out all the possibilities of the situation with your own men and the police. Work out mutual aid to meet the worst conditions.

Twenty of seventy aged and infirm patients died when fire swept this nursing home in Hillsboro, Missouri, October 31, 1952. Fire spread rapidly through combustible interior and unenclosed stairways. Five victims were found on the third floor of the home, near one of the exits which was latched on the inside. Inadequate electrical wiring was considered to be the cause of the fire.

Suggest alarm box installation in the institution and see that the building has a heat detection system and emergency lighting equipment. Make sure that the institution's records are kept in an adequate safe, so that a check of the inmates can be made after the fire.

Make frequent inspections. If your state law or city ordinance does not give you direct authority, the agent of the Department of Health or Welfare, who has the authority, can deputize you to accompany him. But the conscientious convalescent home manager should welcome you anyway. He doesn't want a fire, nor does he want his clients burned or asphyxiated.

Whether in Boston, with its sound Building Department rules for aged and convalescent homes, its excellent Fire Prevention Division, and its experienced rescue squads; or in the smallest town, the problem of the aged, sick and helpless in these nursing homes presses upon fire chiefs with particular urgency.

You must size up your nursing homes and hospitals; inspect them; plan in advance every detail of your method for handling the rescue work, and fire fighting; organize the hospital staffs, your own crews and the police; and be eternally poised for the emergency. With the cooperation of your other municipal and state officials, and with your own determination that no disastrous loss of life shall occur in your community, you can meet the challenge.

Ten months before fire started in this Nicolette, West Virginia, infirmary the Fire Prevention Bureau of the nearby Parkersburg Fire Department had made an inspection and recommendations for improving fire safety in the building. No corrections had been made when fire started in the boiler room of the 2-story brick, wood-joisted building and an 80-year-old inmate died before rescue operations were completed.

Pertinent Publications!

NFPA *Quarterly* Reprints

No. Q46-10 — "Cedar Grove Nursing Home Fire"

No. Q46-13 — "Florida Nursing Home Fire"

25 cents per copy, discounts for quantity purchases

Write to:

National Fire Protection Association

60 Batterymarch Street, Boston 10, Massachusetts

An Effective Fire Fighter Recruitment Program

A FIRE fighter recruitment program in operation in Providence, R. I., may well prove to be a pattern for other large municipal fire departments. The system was devised and placed in operation in 1945 under the direction of Chief Lewis A. Marshall. Under the plan men are carefully screened and selected for enrollment as fire cadets in the department's training school. They must serve for six months as cadets without status in the department and must successfully complete all prescribed training and examinations before becoming eligible for appointment as members of the department and beginning a six-month period as probationary firemen.

The fire cadets are under a separate rigid code of discipline and 10 demerits means automatic rejection and termination of training. Chief Marshall states that the first concern of the officers of the Training Division, headed by Captain John V. Langton, is to see that the individual cadets want to become fire fighters rather than merely seeking a job on the city payroll.

At the cadet academy they receive $50 a week subsistence wage while working approximately 90 hours a week. Each class of approximately 30 cadets mans two pieces of apparatus and the men are required to bunk in every other night from 7:30 P.M. to 8 A.M. The cadet companies are commanded by experienced fire fighters and officers, who earn points toward their own promotion by volunteering for tours of duty at the cadet academy.

Cadet companies respond to all multiple alarms, report to the officer in charge of the fire and render such assistance as they can. This provides a reservoir of 15 to 30 additional men to handle hose lines, assist with ladders and perform salvage work.

The selection of men for cadet training is based on a point system which is scrupulously followed. Points are allocated only after a careful processing during which detailed information must be furnished for each part of the evaluation. There are minimum requirements for physical fitness, height and weight, but extra points are earned for each semester of formal education above the required minimum. Points are also given for outstanding military service beyond the 5 points given to all veterans. Previous employment in trades involving physical stamina and ability to work with the hands also brings added credit.

Total points are computed as of the closing date for each class which is advertised in the newspapers. Men are selected for the academy on the basis of the best scores of those filing application. When the class is tentatively chosen, a careful investigation of each selected applicant is made by the Providence Police Department and character references are also interviewed. Incidentally, the Police Department follows a similar cadet recruitment program.

THE present cadet class includes one graduate from the University of Rhode Island and a number of other men with credits for college training. However, 5 men who lacked the basic required two years of high school, qualified by passing an equivalency examination given by the Providence Equivalency Board.

Upon reporting to the Training Division, the cadets begin a 13 weeks "basic" course designed to make each man ready for service in any fire company to which he may be subsequently assigned. The first three days are spent on indoctrination to the fire service. Men are taught to slide the pole safely and properly. House watch is maintained at the training station which at present is housed in an old fire station. Each morning, after housework is completed, the cadet crews report to the drill tower with their apparatus or attend classes conducted by fire department instructors. The departments' standard drill evolutions form the basis for much of the initial training. The men learn the departments' signals and the operation of various types of apparatus, including pumpers and aerial ladders. The training includes study of the water systems and courses in chemistry of fire and ventilation. Fire prevention inspection is stressed because all Providence fire companies make inspections "on the air." The men are taken to the proving ground of the Grinnell Sprinkler Company in Cranston to practice fighting various flammable liquid fires, after they have had basic training in the handling of hose streams. Fire service hydraulics is stressed and the men must be able to use various fire ground formulae in addition to having an understanding of the hydraulics of fire streams.

At least three detailed examinations given during the training program must be completed satisfactorily. These cover all of the subjects given during the course. After 13 weeks at the academy the men are assigned to various fire department companies where they perform under the eyes of fire company officers for advanced experience, but the cadets still remain under the jurisdiction of the training division.

During this advanced training, trainees work one week of days and one week of nights, Mondays through Saturdays. The men are assigned to most of the engine and rescue companies.

UPON satisfactory completion of six months of intensive training, the cadets are placed upon the list in the order of their grading for appointment as probationary firemen as vacancies occur. In less than nine years the training division has approved 254 cadets for appointment as probationary firemen. Completion of the training course practically assures such appointment within a year. As a matter of fact, since a law permitting retirement after 25 years' service (regardless of age) was adopted recently, the cadet program has been accelerated to supply sufficient probationary men. The probationers receive $73 a week.

Chief Marshall is highly pleased with the success of the cadet program. Now probationary firemen appointed to the department are better trained than many of the experienced fire fighters before the program was initiated. The program attracts a large number of candidates and as only the top 20 to 30 percent are ad-

(*Continued on page 18*)

SELECTION OF POTENTIAL TRAINEES FOR THE PROVIDENCE FIRE DEPARTMENT

This is a digest of a 30-page manual outlining the grading system.

QUALIFICATIONS

Must have attained 21st and not 32nd year of age.

Visual acuity to be better than 20/50 in either and both eyes.

GRADING

To become a recruit in Trainees' School any part of 100 points are attainable as follows:

Up to 50 points on competitive examination.

Up to 50 points on basis of seven approved factors of desirability. These factors constitute a set of specifications by which the human equation can be measured and graded.

The Factors are:

1. Physical Qualifications: Age; proportion of weight to height; vision acuity.

2. Scholastic attainment; or alternative, scholastic equivalencey; military service; points on military record; previous employment experience.

The summation of points accredited to the potential recruit in these counter balancing factors serve to create a desirability standard. Each recruit is accredited or demerited in measuring up to the specifications in Factor Grading.

It is not to be construed that all desiring to become recruits be graded by these factors. Only those potential recruits who have been preliminarily screened and are deemed to be fit for fire service are to be measured by the Factor Standards.

When a group of potential recruits who have survived the preliminary screenings is numerically greater than the Departments needs then it is the function of the Factor Grading Chart to select those most desirable for the fire service.

FACTOR SCORING POINTS

(1) AGE: Ages 21 to 26 most desirable; 5 factor point credit.

Ages 27 to 31; one point demerit for each year up to 5 points.

(2) PROPORTION OF WEIGHT TO HEIGHT: 67 inches minimum requirement; minimum weight 145 lbs. by proportion to height.

Basic weights are established by requiring a weight of 2½ pounds for each inch of height. All fractions of an inch to be resolved in the nearest pound.

Full desirability in height and weight proportion is accorded to the potential recruit whose weight is within 5 percent above or below basic weight requirement.

A DEFICIENCY SCALE for those potential candidates who do not meet the proportion basic weight and height standard in excess of 5 percent shall be demerited points as follows:

UNDERWEIGHT: One point for each 2 pounds up to 10 pounds.

OVERWEIGHT: One point for each 4 pounds up to 20 pounds.

REJECTION WEIGHTS: Those potential candidates weighing 15 percent below or 25 percent overweight are to be rejected.

(3) VISUAL ACUITY: Basic vision is established when a potential recruit has a visual acuity of 20/20 or better when his vision is tested without the aid of any corrective device. Glasses, though not objected to, must not be worn during the visual acuity test.

A deficiency scale becomes operative when the visual acuity falls below 20/20 in either eye with no distinction as to which eye.

ACCEPTABLE MINIMUM: When the visual actuity falls to 20/50 in either or both eyes a high degree of undesirability is indicated and the candidate should be deemed a medical reject.

A Grading Deficiency Scale up to 5 points loss to the potential candidate is operative on those candidates who do not meet the 20/20 basic requirement.

(4) SCHOLASTIC ATTAINMENT: The minimum requirement is 2 years of attendance in high school or, under some modern school grade classification, the 10th grade in an accredited secondary or high school duly recognized.

It is not to be construed that attendance at a trade, commercial or vocational school shall come under scholastic attainment unless they are fully accredited as high or secondary schools in the community in which they are established.

CREDITS FOR ADVANCED ATTAINMENT: Candidates whose scholastic attainment exceeds the required minimum are awarded credit points for such advancements on the basis of the established schedule.

What constitutes advanced attainments shall be interpreted strictly and no such credit points shall be awarded for scholastic attainments which only serve to make up deficiency in the minimum requirement. (Up to 10 points attainable.)

(5) SCHOLASTIC EQUIVALENCIES: Candidates who have not satisfied the minimum requirement for scholastic attainment can only be accepted after certification by the Equivalency Board that they possess the scholastic equivalent of the minimum requirement.

To possess basic equivalency, a candidate must have developed his intellectual capacities to a point where they are equivalent to the capacities of one who has completed two years of high school. An Equivalency Board certification that such capacity has been attained must be granted to all non-complying candidates under Factor 4.

The Equivalency Board has the power to use any activity, endeavor or vocation engaged in by the candidate for the purpose of grading the candidate for those scholastic deficiencies that the candidate is handicapped by.

These activities, endeavors or vocations can be military service, structural iron work, training in schools not regularly constituted, self-education, completion of a trade or craft, and similar accomplishments.

EQUIVALENCY IN EXCESS OF REQUIRED MINIMUM: The Equivalency Board may award credit points, up to five points, when the intellectual development of a candidate is deemed to exceed the equivalency of two years of high school. However, candidates who are certified by the Equivalency Board are never to be scored under Factor 4.

(6) MILITARY SERVICE: For service in the armed forces of the U. S. or the Merchant Marine, 5 points preference are awarded.

CREDITS ON MILITARY RECORD: In addition to the 5-point preference, credits are awarded for length of time in domestic and foreign service, engagements in campaigns or battles, award of personal citations or decorations, and promotion in rank attained in the service.

These award credits are attainable up to 50 credit units of which 25 or more are necessary to gain the 10 point factor value. There is a deficiency scale for less than 25 credits but each candidate on the basis of honorable service is entitled to 5 points.

(7) EMPLOYMENT EXPERIENCE: An employment experience, present or past, which constitutes an increase of manual dexterity, mechanical skill or sensory immunity to efficiency decreasing fears makes a candidate of greater desirability and eligible for preferential points.

This factor is made available to increase opportunity of entrance to such candidates who by previous work experience are best fitted to become firemen.

BASIS FOR CREDIT POINT AWARDS: The full value of the factor is ten points. However, a full ten points is to be given only when the candidate has had such experience as to make him highly desirable for the Fire Department.

Charts for various forms of employment are listed and from these a deficiency scale is computed to prevent scoring 10 points to such candidates whose work experience is not of maximum desirability standard.

An Effective Recruitment Program

(*Continued from page 16*)

mitted as cadets the department is recruiting the men best equipped both mentally and physically. The rules are strictly adhered to and politics is never permitted to enter the picture. This has proven to be a relief for city "politicians" who otherwise might have a number of constituents who wanted backing for limited job openings. Men are selected for appointment on their qualifications and officers are no longer tempted to approve misfits out of sympathy for the men or their families. The cadet training is just the first step in the in-service training and advancement program conducted the Training Division of the Providence Fire Department.

Records and Procedures in the Processing of Applicants

Some 14 printed record forms are used in the Division of Training's School for Trainees in the processing of applicants for appointment as follows:

1. Application for Appointment: A 4-page form covering military service, education, residence, marital status, criminal record, character references including past and present employers.
2. Physicians' Report: Made at the request and expense of the applicant by his private physician.
3. Verification of Citizenship: To be declared under oath before a notary public.
4. Scholastic Verification: Covering in detail all formal education or an equivalency test.
5. Verification of Honorable Discharge and Military Service Memorandum: Covering length and type of service, rank and promotions, service schools, etc.
6. Eligibility of Applicant: Upon which the verification of eligibility covering the above requirements are listed and a candidate list given status as "eligible" or "not eligible."
7. Report of Police Investigation: Made of all men thus far listed as eligible.
8. Report on Character Reference.
9. Report of Employer.
10. Report of Fire Department Physician.
11. Action Relative to Granting Status: Including verification of eligibility, date from the police investigation and employers and character references.
12. Certificate of Status: Granted for one calendar year to men entitled to be drawn for competitive examinations subject to seniority of other accepted applicants having such status.
13. Removal from Status Under Regulations: Due to false statements, excessive age, failure to report for final competitive examinations, rejection due to physical or psychiatric examination, failure to attain the required 50 points for appointment, failure of appointment after being twice processed.
14. Notice of Rejection: By the Director of Training.

This data provides the start of an excellent personnel record covering men appointed to the department and indicating individual qualifications and background.

(*In a future issue of* FIREMEN *we will describe the promotional schools whereby Providence Fire Fighters qualify for promotion. — Ed.*)

Ready for Distribution!

NFPA Standard No. 193-T

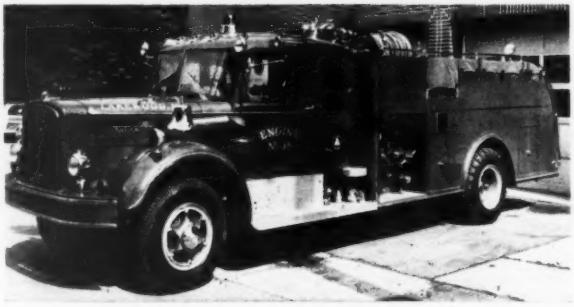
Tentative Standard Procedure for

AERIAL LADDER TESTING

20 pages, fifty cents per copy

Write to:

National Fire Protection Association
60 Batterymarch Street, Boston 10, Mass.



Lakewood, New York, Gets New Pumper

Here's an American-Marsh 750 gpm 2-stage centrifugal pumper recently obtained by the Lakewood, New York, Fire Department. It features a 4-way top mounted Eastman-Barker deluge set, a 600 gallon booster tank, a hose body which accommodates 1500 ft. of 2½ in. hose and 400 ft. of 1½ in. hose and two other hose compartments which can hold two 200 ft. loads of 1½-in. preconnected lines. Twin booster reels are electrically operated. The cab seats eight men comfortably and also includes a 60 watt RCA mobile radio. The pumper, mounted on an Autocar chassis, was purchased through the Federal Civil Defense Administration matching funds program.

A Manual on Ladders

A PUBLICATION on ladders is the first of a series of fire department manuals which is being developed by the staff of the Fire Protection Department of the School of Technical Training of Oklahoma A and M College. The new manual, edited by Everett Hudiburg and W. Fred Heisler, describes the physical characteristics, design, and construction details of ladders and covers their use by the fire service and testing. It is 5½ by 8½ inches, 80 pages with a paper cover and sells for $1.00 per copy, and orders should be sent directly to A and M College Bookstore at Stillwater, Oklahoma.

SMOKE DRILLS

are necessary to maintain efficiency and reduce the hazards of fire fighting.

SMOKE CHAMBERS are not necessary for smoke drills. Any room can be used for training firemen, emergency and civilian defense units in safe procedures and using artificial breathing apparatus in dense blinding smoke. Simply ignite a **SUPERIOR GRAY SMOKE BOMB** in the room, and in a matter of seconds, the room is filled with thick gray smoke, simulating actual fires. This smoke is safe. It does not leave a residue covering walls and smudging clothing. When finished, merely ventilate the room, and like magic, the room is reconverted to its original use. The **SUPERIOR GRAY SMOKE BOMB** is so inexpensive that every fire department can afford smoke drills until top efficiency is achieved and maintained. The **SUPERIOR GRAY SMOKE BOMBS** are **$7.20** per dozen. Satisfaction guaranteed or money promptly refunded.

SUPERIOR SIGNAL COMPANY

6 Colfax Street **South River, N. J.**

Luna Beach "Fire Department"

A SCALE model of a modern fire department has been designed and built by Thomas J. Showers, 4144 Lynd Ave., Arcadia, California. The builder has been constructing model fire apparatus for many years and has his own museum of historical fire photos and equipment. Included in his museum, which has been visited by many California firemen, are 44 models of fire apparatus, an ancient Foote-Pierson register and bell, an old "watch-rattle" of the New York City Fire Department and one of the first hose clamps used in this country.

The model fire department is built on a scale for a city of 50,000 population with miniature apparatus and station locations designed according to NFPA and NBFU standards. The fire department includes 5 pumpers, 2 aerial ladder trucks, one "quad," one rescue truck, a squad truck, a pumper for foam and wet water fire fighting, a fireboat, two reserve units and a mobile kitchen.

Mr. Showers has 28 blueprints of his models which he offers to distribute to other hobbyists. Fifteen of the blueprints are for apparatus models dating from steamer conversion tractors to a 1937 New York Fire Department hose wagon. The "B" series of prints describes 13 different types of apparatus dating from a 1910 Seagrave "Side Saddle" 75-ft. aerial ladder truck to a 1953 Ward-LaFrance pumper.

Arson Investigation Training

THE first short course in arson investigation was held at the University of California, Berkeley, June 21–25. Participants included arson investigators from fire and police departments and other organizations in California, Oregon, Washington, Idaho, Nevada, Utah and Arizona.

Dr. Richard B. Steinmetz, Chief Special Agent, Mutual Investigation Bureau, Chicago, Illinois, helped to inaugurate the course. Other featured speakers included Professor O. W. Wilson, Dean, School of Criminology, University of California; Dr. Thomas N. Barrows, and Samuel L. Fick of the California State Department of Education.

Another course is scheduled for April 25–29, 1955.

Pals!

"CHOICE FOR QUALITY THE WORLD OVER"

INDIAN

FIRE PUMPS are a Fire Fighter's Best Friend!

There's no wonder so many fire fighting agencies have come to depend upon **INDIAN FIRE PUMPS** for 40 per cent of their calls.

Experience has proven that a portable **INDIAN** will do the job faster and easier . . . save time, save money. **INDIAN FIRE PUMPS** will give years of service without maintenance cost. Many twenty years old are still in use.

SEND FOR CATALOG

SHOWN BELOW

1949 Ford chassis Boardman-Built Fire Fighter; 500 GPM, 2 stage pumper purchased by the city of Bentonville, Arkansas. It is equipped with an INDIAN FIRE PUMP. Built by The Boardman Co., Oklahoma City, Oklahoma.

All seams are electric welded. No leakage.

"Discarded Soda Acid Extinguishers for INDIAN FIRE PUMPS"

"Over a year ago we discarded soda and acid type extinguishers and equipped with your **INDIAN FIRE PUMPS** which are giving great satisfaction with everyone well pleased.

We use **INDIANS** on fires that look impossible for a small pump to handle but they have always held the fire until a line could be laid and in most cases have the fire out before the line is laid."

H. B. Wells, Fire Chief
Newbury, S. C.

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CANADIAN AGENTS

Fleck Brothers, Limited 110 Alexander Street Vancouver, B. C., Canada

Halprin Supply Company 1355 So. Flower Street Los Angeles 15, Calif.

Fred E. Barnett Co. 600 Spring Street Klamath Falls, Oregon

L. N. Curtis & Sons 426 W. Third St. South Salt Lake City, Utah

C. E. Hickey & Sons, Limited Hamilton, Canada

"Full Waterfront Assignment"

ON THE evening of June 25, explosions and fire occurred at the San Pedro, California, Marine terminal of the Tide Water Associated Oil Company. This is a terminal for marine pipe line operations and the involved property contained 17 flammable liquid storage tanks ranging from 5,000 to 55,000 barrels in capacity.

The explosions occurred while a plant employee, who was a "gauger," was pumping gasoline from a storage tank containing about 1773 barrels of the fuel. Another nearby tank had about 152 barrels of gasoline. When ignition occurred both of these tanks exploded, killing the gauger and blasting the roofs free from the tank shells. At the same time a pipe line (near the first-mentioned tank) ruptured and fuel oil spread on the ground and became involved.

Simultaneous box and telephone alarms brought Los Angeles fire fighters in "full waterfront assignment," including 2 engine companies, 1 truck company, 1 salvage company, 2 fire boats, a boat tender and a battalion chief. Additional alarms brought 6 more engine companies, a rescue company and a utility company.

The tank area was divided into two sections surrounded by a concrete dike 14 feet in height. The plant had a conventional foam system installation featuring "A" and "B" tanks, a pump house, and lateral lines to foam chambers on the tanks. Water mains were available throughout the area and all tanks were equipped with conventional type vents and self-closing gauging hatches.

Night scene at San Pedro showing fireboats supporting the attack. During the two days of fire fighting some 2 million gallons of water accumulated in the diked area surrounding the involved tanks. (*Wide World Photo.*)

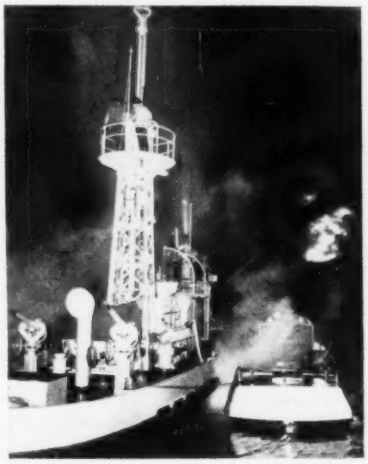
Responding fire fighters immediately attacked the ground fire which was spreading from the ruptured pipe line. However, early in the attack the sump pump failed and water began to accumulate throughout the diked area. As the water level rose flaming fuel oil spread to cause other pipe line failures and subsequently seven other tanks were involved or surrounded by fire.

Twelve hand lines, 4 wagon battery streams, 3 streams from monitor nozzles on fire boats, and 3 foam generators were used in attacking the fire and protecting exposures. Plant personnel and about 100 fire fighters from the U. S. Coast Guard assisted fire department personnel in these operations.

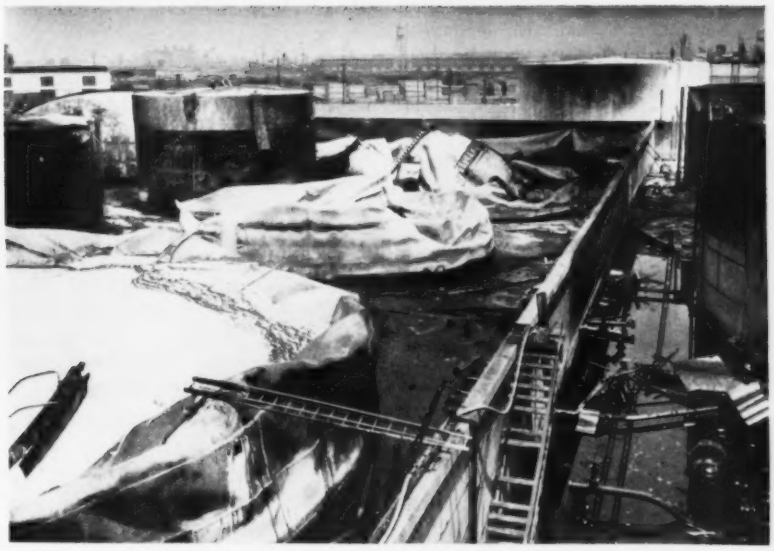
In a little more than an hour after first attempts were made to control the ground fire, men using hand lines for this purpose were driven out of the diked area by the intense heat. Thereafter, until control was established, fire streams and foam had to be applied from on top of, or outside the dike walls, which, fire department reports inferred, were too high to permit effective fire fighting operations.

Shortly after hand line attack on

(*Left*) Aerial view of involved tanks. Note the accumulation of water and foam which has developed in the confined area. (*Wide World Photo.*)



(*Right*) Fire Boat No. 2 of the Los Angeles Fire Department shown in action with monitors directed on fire. Fire Boat No. 3 is wharfed alongside. (*Official Photo Los Angeles Fire Department.*)



View of collapsed tanks and 14-ft. concrete dike wall. Note foam in tank in foreground. While plenty of water was available, failure of the sump pump allowed the water to accumulate. As a result water level within the diked area attained a depth of 4½ feet, when sump pumps failed to remove the 10,000 gpm of water used in the fire fighting operations.

the ground fire was withdrawn, the high flash point fuel in nearby tanks began to heat, causing the tank roof shell seams to crack. Eventually seven tanks developed seam cracks and five became involved by fire. Two of these tank fires were successfully controlled and extinguished by foam application, which later achieved good results on the ground fire when the foam was directed over the dike walls on the north and west sides of the plant area.

Harbor personnel, Civil Defense and disaster organizations responded to the area as the fire progressed.

(Below) A fire fighter directs a monitor nozzle to protect an exposed tank. The 14 ft. concrete wall hindered effective application of water and foam, according to reports.

Port operations included the moving of a number of ships which were docked close to the involved area. Six thousand feet of floating booms were strung in the harbor area to prevent fire spread if the flammable liquids escaped from the diked area.

However, fire fighters made a good stop in keeping the fire within the dike walls, and in attacking tank fires which could be extinguished. It was estimated that of 194,000 barrels of flammable liquids stored in the involved tanks, 162,000 barrels were saved.

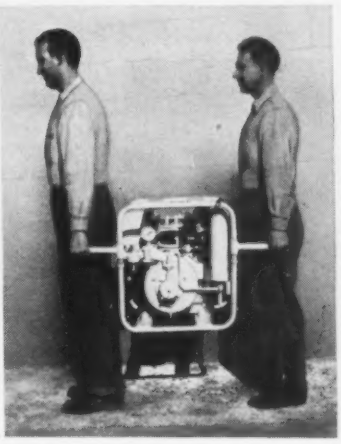
According to reports the fire might have been controlled in its initial stages but for the failure of the sump pump power supply. The 14-foot dike walls provided impounding basins equal to the total capacity of all tanks in the two areas, in accordance with the Los Angeles Municipal Code for such installations. The height of the dike walls exceeded recommendations of NFPA Standard No. 30-L, "Suggested Ordinance for the Storage, Handling and Use of Flammable Liquids." This standard also recommends a weakened seam in the roof of vertical aboveground storage tanks to provide relief for internal pressures which might develop because of exposure fires.

The cracking of roof shell seams in this fire afforded fire fighters with the opportunity of establishing control over some of the involved tanks.

Hale Type FZZ

Fine For Relaying to Major Pumper . . . .

Easily Carried by 2 Men



Chief Leon Arnold of Newellton, La., writes . . . .

We have received from you your portable Pump, Type FZZ, which we are thoroughly satisfied with. We have only had to use it once since our purchase in September of last year, but it did a big pump job for 1½ hours through a 300 ft. line of 2½-inch hose branching off in a "Y" to two 1½-inch lines, 150 ft. each.

We carry this unit on our 500-gallon pumper to use in places where we can not get near enough to water. Two men can easily carry it any place.

We recommend the Hale FZZ Portable Pump for any Fire Department.

Below — FZZ Relaying through Major Pumper.

The Hale Type FZZ portable fire pumping unit pictured at top can be easily carried by two men to source of water which truck cannot reach, for refilling booster tank or for fighting fire direct. Unit is also available mounted on two truck-type wheels or on rubber-cushioned steel channels.

The unit can be mounted on virtually any apparatus, making it possible to fight fire while apparatus is in motion, using booster tank for source of water.

Capacity of FZZ is 60 G.P.M. at 90 lbs. pressure: 150 G.P.M. at 30 lbs. pressure. Provides two capable fire streams through 1½" hose lines, using ½" nozzles.

Note: Discharge Adapter can be supplied for use with 2½" hose.

Ask for demonstration. No obligation

Write today for FZZ Folder to

HALE FIRE PUMP COMPANY

CONSHOHOCKEN, PA.

Fire Pumps in All Standard Capacities

Symbol of Quality-Service-Protection for the modern firefighter

The famous Midwestern Manufacturing Company trademark is your guide to the finest protective clothing that money can buy — garments that are specifically designed to help safeguard your men's life on every run — enable them to use their equipment to the fullest advantage.

★ Exclusive Safety Features
★ Tailored for Comfort
★ Softer, More Pliable Materials
★ Made of Natural Rubber

We manufacture both rubber and fabric fire coats. In our vast selection of materials you will find the type of fabric exactly suited to your climate and needs. For complete information on our full line of firemen's protective clothing, see your Midwestern dealer. A letter to the factory will also bring you literature and material samples for your inspection.

MIDWESTERN MFG. CO., Mackinaw, Illinois
Manufacturers of the Famous **MACKINAW Coats**

CAIRNS "CLIFTON"

NO. 900
PLASTIC

HELMET

Regulation 8-comb style, with standard front; made of FLINT-FLEX; the rugged plastic that is light, tough, flexible and non-conducting; has the new FORMABLE HEAD BAND that can be moulded to your own particular head shape; complete protection at moderate cost. Also available in drop brim style. Other CAIRNS HELMETS in leather and aluminum.

Write for Catalog 340

CAIRNS & BRO., Inc. - Allwood, Clifton, N. J.

Fire School in New Jersey

AN OUTDOOR training program will be conducted by the New Jersey State Fire College at the National Guard Training Center, Sea Girt, New Jersey, October 22–24. The training sessions will be open to paid and volunteer fire fighters and members of industrial fire brigades in that state. Reservations may be obtained by writing to the New Jersey State Fire College, 24 Branford Place, Newark, New Jersey.

"Learner's Workbook"

THE Trade and Industrial Education Service of the Ohio State Department of Education has announced publication of its new "Fire Service Training, Learner's Workbook." The 76-page illustrated workbook is designed to be used in firemen training classes with the "Instructor's Manual" (now in preparation), and the recently issued "Fire Service Training," both prepared by Ohio State University.

Copies of the "Learner's Workbook" and further information may be obtained by writing to Carl J. Schaefer, 200 Communications Laborator, Ohio State University, Columbus 10, Ohio. Single copy price is 63 cents, with discounts allowed for Ohio fire department personnel.

Muscular Dystrophy Campaign

AT THE recent convention in Miami, Florida, members of the International Association of Fire Fighters voted to participate in the November campaign of Muscular Dystrophy Associations of America, Inc. Last year the campaign was supported by letter-carriers of the nation in a house-to-house canvas.

According to reports, the 1,157 locals of the IAFF will conduct a succession of rallies and parades as a means of raising funds.

Buying New Apparatus?

Read the recommendations in the new edition of

NFPA Standard No. 19
"SPECIFICATIONS FOR MOTOR FIRE APPARATUS"
60 pages, illustrated
50 cents per copy

Write to:
National Fire Protection Association
60 Batterymarch St., Boston 10, Mass.

Builders of Fire Apparatus

(*Continued from page 13*)

The first national specification on municipal fire apparatus was adopted by the National Fire Protection Association in 1914 and since that time have been revised frequently and adopted by the National Board of Fire Underwriters and the International Association of Fire Chiefs. (For a complete history of the development of specifications for motor fire apparatus, see the May, 1954, edition of NFPA Standard No. 19 — "Specifications for Motor Fire Apparatus," available from NFPA Publications Department for fifty cents per copy — ED.)

World War I strengthened the demand for motor fire apparatus and the Howe Company delivered 163 pumpers to the U. S. Government for the protection of Army camps. In the second World War 979 pumpers were obtained by the Government for the same purpose.

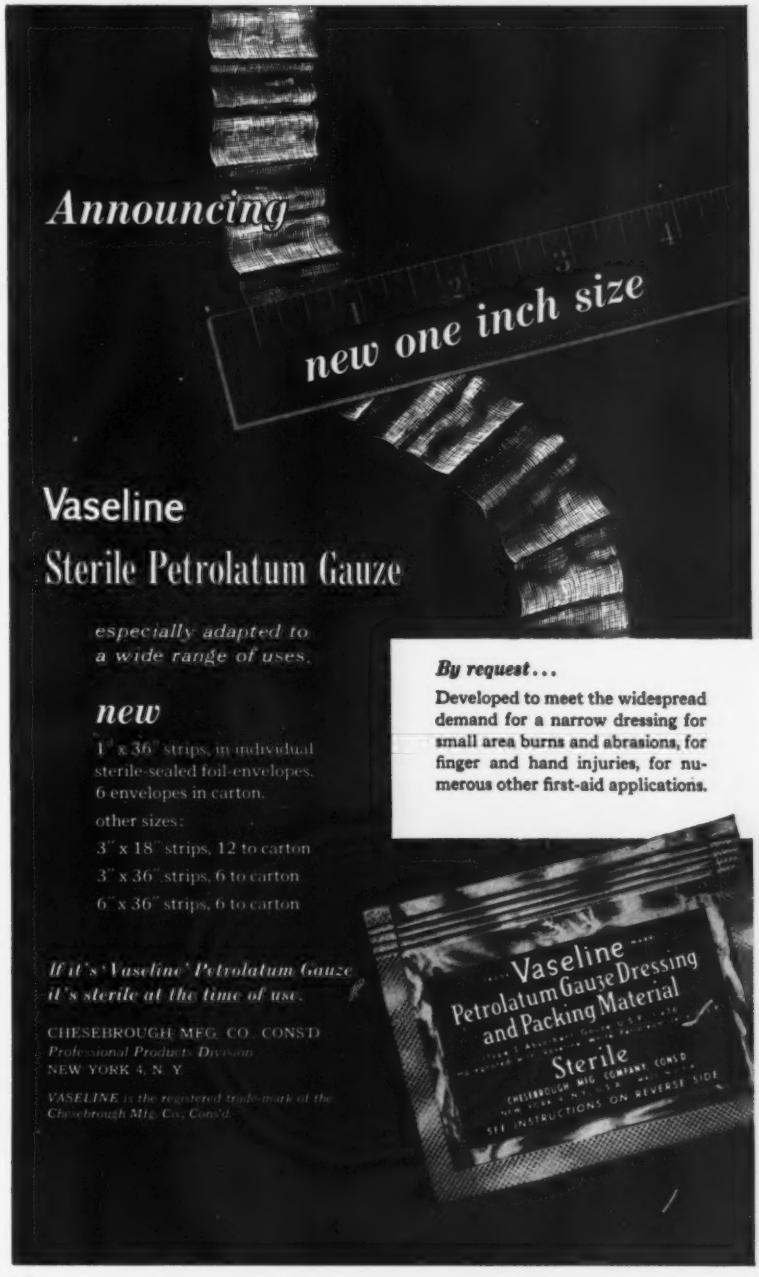
SINCE its organization 82 years ago, the Howe Company has maintained continual production, to keep pace with new specifications and demands of the fire service. In contrast to its first few years of production, the company today produces a variety of apparatus and equipment specially designed to fill the needs of the purchasing municipality or organization.

Among present models being used by the fire service are the Howe-Jeep, nearly 600 of which have been manufactured and delivered during the past five years. Pumpers for municipal and industrial fire fighting are receiving wide distribution and the company is presently supplying the U. S. Coast Guard with crash trucks for airport fire protection. Illustrations of some of these pieces of apparatus are on page 13.

Comparing present-day models with the original horse-drawn and horse-motivated apparatus shows the improvements in engineering and mechanization in sharp contrast. Yet these radical developments in efficiency and capability of fire pumpers have occurred in just a little more than the allocated "three score and ten" years of a man's life. It is quite likely that the fire service will meet with far more phenomenal changes in design and performance of fire apparatus in the coming years.

Kingsville Gets Emergency Car

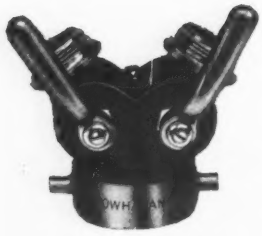
Members of the Kingsville, Texas, Volunteer Fire Department recently received this 1954 Ford panel truck for use as an emergency car. The car was donated by 16 local labor organizations who raised funds for the mobile emergency rescue unit. The car will tow a rescue boat and carry respirators, inhalators, oxygen masks and supplies, cutting torch, portable generator, grappling hooks, and diving equipment.


Announcing
new one inch size
Vaseline
Sterile Petrolatum Gauze
especially adapted to a wide range of uses.
new
1" x 36" strips, in individual sterile-sealed foil-envelopes. 6 envelopes in carton.
other sizes:
3" x 18" strips, 12 to carton
3" x 36" strips, 6 to carton
6" x 36" strips, 6 to carton
By request...
Developed to meet the widespread demand for a narrow dressing for small area burns and abrasions, for finger and hand injuries, for numerous other first-aid applications.
If it's 'Vaseline' Petrolatum Gauze it's sterile at the time of use.
CHESEBROUGH MFG. CO. CONS'D
Professional Products Division
NEW YORK 4, N. Y.
VASELINE is the registered trade-mark of the Chesebrough Mfg. Co. Cons'd.
Vaseline
Petrolatum Gauze Dressing and Packing Material
Sterile
SEE INSTRUCTIONS ON REVERSE SIDE

POWHATAN

One Quarter Turn Siamese

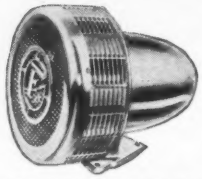
Best your money can buy!



This is but one item in our vast line of precision tooled, strongly built, brass fire-fighting equipment. Since 1892 our single aim has been — improvement of our products — and repeat orders from Fire Departments all over the United States have proven the value of such a policy.

POWHATAN BRASS and IRON WORKS
RANSON, WEST VIRGINIA
Phones 93 & 94 Charles Town, West Virginia
Established 1892

NEW EQUIPMENT
Safety
DEMANDS IT...



CLASS Q SIREN

***Specify* FEDERAL**

BEACON RAY LIGHT

Your new apparatus has more speed, more essential equipment . . . it NEEDS the best possible warning signals! Be sure, protect apparatus — and *lives* — with the Federal Beacon Ray, the 360° rotating light rated best on the market, and a Federal Class "C" or "Q" siren, finest, most powerful you can buy!

Accept no substitutes! Inadequate protection is a poor way to pinch pennies! Send now for latest literature that will help you select the BEST POSSIBLE SIGNALS from the industry's most complete selections. Specify by the name . . . Federal!

FEDERAL SIGN and SIGNAL Corp.
Formerly: Federal Enterprises, Inc.
8717 SOUTH STATE STREET — CHICAGO 19, ILLINOIS

Fire Prevention in California

A NEW section of the Conference of Northern California Fire Chiefs has been organized, according to an announcement by Chief James H. LeStrange of the Berkeley, California, Fire Department. Operations of this section will be devoted exclusively to the problems of fire prevention.

Representatives from 38 different jurisdictions in Northern California voted for the establishment of the fire prevention organization to improve the exchange of information and develop more efficient mutual aid. The new section of the Conference will be composed of men who do actual inspection work through various fire marshals' offices and divisions of fire prevention.

Dates to Remember

Arizona: The Second Annual Arizona State Fire Training School is scheduled to be held in Phoenix, October 14, 15 and 16. Write to: Edwin C. Gracey, Supervisor of Trade and Industrial and Distributive Education, Department of Vocational Education, 400 Arizona State Building, Phoenix, Arizona.

Indiana: The 21st Annual Indiana State Fire School will be held at Purdue University, Lafayette, September 14–17. Write to Director Francis W. Hartman, Chief of Fire Training Bldg., FWA7, Purdue University, West Lafayette, Indiana.

Kansas: The 25th Annual Kansas State Fire School will be held at the University of Kansas in Hutchinson, October 12–15. Write to Director Gerald Pearson, University of Kansas Extension Classes, 111 Fraser Hall, Lawrence, Kansas.

Maryland: The 21st Annual Short Course will be held at the University of Maryland, College Park, September 7–10. Write to Robert C. Byrus, Director, Fire Service Extension, Box 85, University of Maryland, College Park, Maryland.

Ohio: The 9th Annual Ohio State Fire School will be held in Columbus, September 13–17. Write to Wayne C. Jenkins, Assistant Fire School Director, Division of State Fire Marshal, Columbus 15, Ohio.

Pennsylvania: The Annual Meeting of the Keystone State Fire Chiefs Association will be held at Weldon, Pennsylvania. The Abington Township will serve as hosts. Further information may be obtained by writing to Lewis M. Atkinson, Malvern, Pennsylvania.

The Fifth Annual Fire School of the Delaware County Firemen's Association will be held at Essington, October 8–10. Information may be obtained from Chief Russell P. Wentzel, Chief, Lansdowne Fire Department, Lansdowne, Pa.

Virginia: The Annual State Fire School will be held in Norfolk, September 13–17. Write to Clay A. Easterly, Fire Marshal, P. O. Box 1112, Martinsville, Virginia.

One Hand Operation! Easy-to-handle Rockwood WaterFOG nozzle is made of aluminum alloy, weighs only 5 pounds, 5 ounces. Nozzle design reduces reaction to a minimum.

Boy puts out raging fire

The fuel oil test fire above was extinguished in a matter of seconds by a 12-year-old boy — thanks to remarkable Rockwood firefighting equipment.

By using a lightweight, 10-foot applicator, he was able to approach the fire safely as low velocity Rockwood WaterFOG was discharged through the applicator, quenching flames, choking off oxygen and cooling the surrounding area thus preventing "flash back."

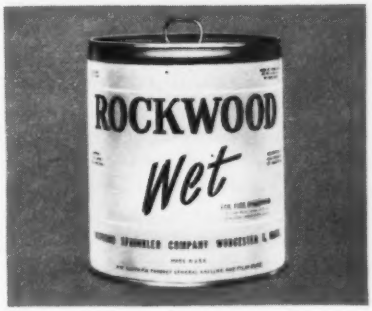
Rockwood WaterFOG is the result of discharging water through a specially engineered Rockwood nozzle that breaks water into tiny particles which burst into a blanketing mist of steam that smothers fire. The Nozzle shown in use here is a 1½" Type SG 48. It can also discharge high velocity WaterFOG, and straight water stream. Available for ¾", 1", 1½" and 2½" fire hose sizes.

Plan to make this and other Rockwood firefighting aids part of your team.

ROCKWOOD SPRINKLER COMPANY

Engineers Water . . . to Cut Fire Losses

Rockwood Double Strength Foam Liquid, 3 parts mixed with 97 parts water, forms a quickly re-sealing, solid FOAM blanket or a highly heat absorbent FogFOAM pattern — depending on the Rockwood equipment used to discharge it. Available in 5-gallon cans or 50-gallon drums.



Rockwood Wet, 1 part mixed with 99 parts water, increases penetration and extinguishing action of water. Excellent where fire is deep seated or where water is scarce. Helps reduce amount of time and manpower required. Available in 5-gallon cans or 50-gallon drums.

SEND FOR THIS INFORMATIVE BOOKLET

ROCKWOOD SPRINKLER COMPANY
Portable Fire Protection Division
289 Harlow Street
Worcester 5, Mass.

Please send me your illustrated booklet on Rockwood fire-fighting products.

Name.....

Title.....

Company.....

Street..... City.....

Zone..... State.....

SECONDS COUNT

when your life is at stake

Pocketaire

on the man and in action in only 7 seconds

Compact, light, completely self-contained, Pocketaire breathing apparatus provides a modern approach to Fire Attack. Its use of oxygen, the only element in air essential to sustain life, involves a minimum of weight and bulk. A rebreather bag provides the needed "fill air".

"First-in" men, wearing a featherweight 4½ pound Pocketaire, are protected against every breathing hazard by a 5 minute work cylinder and an escape cylinder which assures an additional 5 minute safety margin.

"Follow-up" men, using a 15 minute work cylinder, are also safeguarded by the 5 minute escape cylinder. Even this larger 6½ pound unit is sufficiently compact to permit free entry through small openings.

Recharged for just a few pennies from any standard oxygen cylinder, Pocketaire is an inexpensive, lifesaving, breathing apparatus.

Pocketaire . . . longer life for fire fighters

model #1500 $98.50 goggles and carrying case additional

THE CYCLE-FLO COMPANY

986 Bridgeport Ave., Milford, Conn.

Please send me your booklet on Pocketaire Breathing Equipment.

Name .....

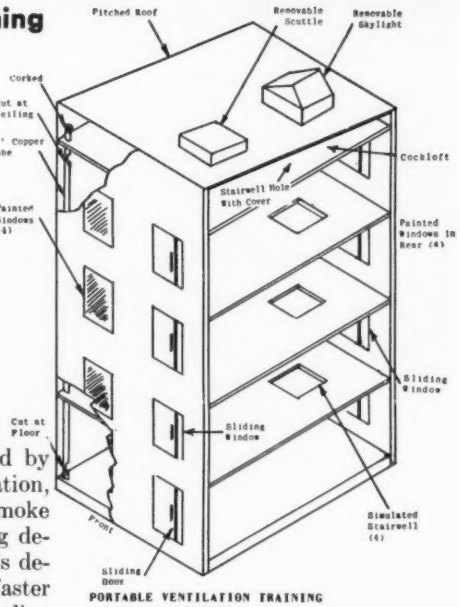
Address .....

.....

A few distributorships are still available. Write for details.

Aid for Ventilation Training

From the August, 1954, issue of "Siren," a publication of New York State's Bureau of Fire Mobilization and Control. Fire departments throughout the United States and Canada perhaps can build training aids, similar to the one described here, for better instruction in ventilation.



PORTABLE VENTILATION TRAINING DEVICE

WHILE slides are being used by instructors to teach ventilation, a better training aid is the "smoke tower" or "ventilation training device." Instructors who use this device find their students learn faster and obtain a clearer understanding of the principles of ventilation which are also presented in the film entitled "Ventilation."

There are various types of ventilation training devices. This one is suggested since it is portable and may be carried on the rear seat of a car.

The building could be likened to a four-story warehouse using a cockloft. It is 13½ in. wide, 18 in. deep, with a height of 42½ in. at the front and 41 in. at the rear. Thus, the building has a pitched roof.

It is constructed of treated pressed board (there are several types available), using "parting strips" as floor timbers, joined with screws.

At the rear of each floor, except the bottom, a 3½-in. x 3½-in. hole is cut simulating a stairwell which permits upward movement of smoke. Hidden in the front left corner is copper tubing running from the bottom floor to the cockloft floor. The tubing at the top is corked. The pipe is cut away under the cockloft floor and at the bottom floor; this tends to move the smoke downward.

There is a slide over the square hole in the cockloft floor with knob. When closed, this prevents vertical passage of smoke to the cockloft. It may be slid open to demonstrate a vertical opening to the cockloft area when the skylight directly above the hole is removed.

There is a 5-in. x 5-in. scuttle covering a 3-in. hole in the roof. When this is removed and the cockloft slide opened, with the skylight in place, the smoke moving through the cockloft shows improper ventilation. The skylight is about 6½ in. square above a 3-in. square hole in the roof.

The building has a door and openings for movable windows which are made of pressed board. Thus, if a front window and a rear window on the same floor are opened, cross ventilation may be shown by using a small fan or by blowing.

The right side of the building consists of a sheet of plate glass which must be kept clear so that smoke movement may be observed.

There are various ways of manufacturing smoke, but it has been found that red or amorphous phosphorous seems to produce the best results, (although the demonstration must be given near the end of the unit since the smoke may disturb the students). Two small tin cans, about 2 in. in diameter are cut down so they are about 1½ in. high and placed on top of each other; the lower one with the bottom up and the upper one with the bottom down. Into this upper one is placed about one-half thimbleful of the phosphorous and which is ignited after the scuttle, the skylight, cockloft slide, and all the windows are closed. The door is then closed.

Smoke will fill the first floor and gradually the entire building. When the fire is nearly out, the door is opened and a large puff of smoke will explode out through it, the fire brightens, demonstrating a back-draft.

Then the door is closed, the skylight is removed and the cockloft slide is opened. Some smoke will come out of the skylight hole, but when the door on the first floor is opened, a great deal of smoke will travel upward, and turbulent smoke will be noticed on the first floor. That area will then clear of smoke. This demonstrates proper ventilation.

The skylight is then placed in position, and the scuttle is removed. Smoke will travel across the cockloft demonstrating improper ventilation and "pulling a fire" across a floor.

The instructor will want to experiment with the movement of the smoke through the building, and with other means of producing smoke.

Ventilation training devices have been built with knobs and wires controlling windows and doors. While a device of this sort can be made very elaborate with remote controls, it must be simple and dependable. Constant movement in and out of cars and fire stations requires foolproof construction so it will work every time during instruction.

Parakeet on a Jag

FIRE fighters at Passaic, N. J., recently made the acquaintance of a beer-drinking parakeet, according to an Associated Press news item. The bird named "Taffy" left the home of Mr. and Mrs. Charles Van Winkle Henry one day in July and perched in a tree outside. The fire department was called, but as responding apparatus pulled up to the Van Winkle home, the sound of sirens sent Taffy to parts unknown.

Three days later the bird appeared in a pile of lumber in Clifton, N. J. A worker named Hagedorn, who lived in North Arlington, took Taffy to his home where the bird sulked silently for several days.

Finally, one week after his escape, the bird announced "I am Taffy Van Winkle, Broadway, Passaic." (*No skepticism please. — Ed.*)

Mrs. Hagedorn consulted the phone book, called Mrs. Van Winkle and the parakeet was returned to his home.

NEW PUMPER FOR ROSE TREE FIRE COMPANY

Rose Tree Fire Company No. 1 in Upper Providence Township, Pa., recently received this 500 gpm pumper. The truck is a new International model R-1856 with the 175-inch wheel base. It has a 500-gallon water tank and carries 1200 ft. of 2½-in. hose.

Fight Fires Faster!

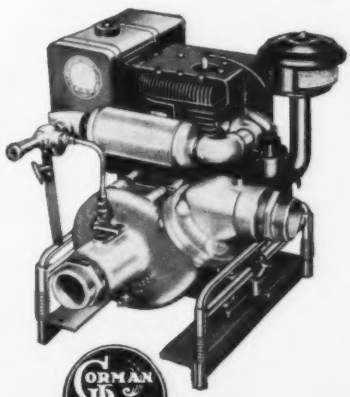
with the DUAL FIRE FIGHTER

DIRECT PUMPING

AS A BOOSTER

Use the Dual Fire Fighter direct when truck pumper is unavailable.

Prevents costly damage to valuable equipment . . . extends your pumper truck range as much as 300 feet . . . reaches otherwise inaccessible water sources.



When fire strikes — prompt, sure action is an urgent necessity, and water is often inaccessible to the truck pumper because of trees, fences or other obstacles.

Two men carry the 162-pound Gorman-Rupp Dual Fire Fighter. Fighting a fire directly, or filling a vital need as a booster pump, the Gorman-Rupp Dual Fire Fighter starts throwing water in less than one minute.

Write for Bulletin No. 9-FD-11

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MANSFIELD, OHIO

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Frank L. MacNamee, Comm., and George E. Hink, Dep. Comm. and Chief of Department, observing that this tool saved life, time and property speedily equipped all Philadelphia Fire Dept. apparatus with it.

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Application for Fire Department Membership

National Fire Protection Association

60 Batterymarch Street
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Please enroll .....

- ☐ Individual (Chief)
- ☐ Municipal Fire Department (Paid)
- ☐ Municipal Call or Volunteer Department or Company
- ☐ Industrial Fire Brigade membership fee $12.50, plus $1.25 per subscription of FIREMEN per year.
- ☐ Government Installation Fire Departments—Membership fee $12.50, per subscription of FIREMEN per year.

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Mailing Address .....

.....

State or Province .....

Membership dues $12.50 per year.

Fire departments and chiefs of such departments joining NFPA should send mailing list for 6 subscriptions to NFPA FIREMEN magazine. Additional subscriptions cost $1.25 each.

Enclosed (Check or money order) ☐

Please send bill ☐

BETTER HOSE CARE—WITH CIRCUL-AIR

THE AIR CONDITIONING FIRE HOSE DRYER

Circul-Air is the patented, electrically operated hose dryer which circulates prewarmed fresh air through coiled wet hose at the rate of 5 to 6 air changes per minute. It's designed to lengthen hose life, improve the appearance and functional design of new fire houses, and to save floor space and hard work. No other drying method is so fast—so economical—so easy to use.

Circul-Air Dryers have passed the Approvals Tests and are listed by the Underwriters' Laboratories, Inc., Chicago and the Canadian Standards Association.

Write for Catalog TODAY

THE CIRCUL-AIR CORPORATION
575 East Milwaukee Detroit 2, Michigan

NFPA Welcomes:

The following fire chiefs and fire departments who have recently enrolled in the Association. Present NFPA Fire Department Membership totals 2,109 fire departments and 25,668 men.

California: Riverbank Volunteer Fire Department, Riverbank; Muscoy Fire Protection District, San Bernardino.

Connecticut: The Mohegan Fire Company, Inc., Montville, Norwich; Chief Carl P. Sawyer, Poquonnock Bridge Fire Department, Poquonnock Bridge.

Florida: Chief Leo T. Herber, Sr., Conway Volunteer Fire Department, Orlando.

Georgia: Chief John W. Purgason, Hogansville Fire Department, Hogansville.

Illinois: Chief F. M. Amsrud, Blackhawk Fire Protection District, Rockford; Chief Alphonse Thessing, St. Libory Volunteer Fire Company, St. Libory.

Indiana: Chief L. Siekmann, Columbus Fire Department, Columbus; Chief Morris Painter, Farmland Fire Department, Farmland; Chief Conrad W. Tucker, Huntertown Volunteer Fire Company, Inc., Huntertown; Chief Lyman Gruwell, Peru Fire Department, Peru; Poseyville Fire Department, Poseyville; Chief James C. Connolly, Syracuse Volunteer Fire Department, Syracuse; Union City Fire Department, Union City.

Maryland: Thistle Fire Department, Ilchester.

Michigan: South Haven Fire Department, South Haven.

New Hampshire: Chief Albert M. Lessard, Somersworth Fire Department, Somersworth; Meadowood Fire Department, Troy.

New York: Chief R. Gangloff, Centerport Fire Department, Centerport.

Ohio: Archbold Fire Department, Archbold.

Rhode Island: Warwick Fire Prevention Bureau, Warwick.

Virginia: Burke Volunteer Fire Department, Inc., Burke.

Know What You're Kicking

AT CHESTER, Pennsylvania, according to the Associated Press, twenty volunteer firemen paid little attention on August 3 to a charred box they saw in the midst of an underbrush blaze they fought for four hours in nearby Green Ridge. The fire extinguished, one of the volunteers kicked the box — and out rolled 40 sticks of dynamite.

FIRES IN THE NEWS

Pekin, Illinois, August 4. (*Wide World Photo.*) A multi-million dollar loss was estimated when fire and explosion occurred in this plant of the American Distillery Company. Lightning started fire which spread to involve and destroy two warehouses and eventually resulted in explosion of a rackhouse. An estimated 100,000 barrels of whiskey was involved in the fires and explosion. Six persons were killed and 29 were injured, including fire fighters who responded from Peoria and other communities in Tazewell County.

Kansas City, Kansas, July 3. An estimated $500,000 fire loss resulted when this 2-story brick, wood-joisted building became involved. The fire apparently burned for about one hour before discovery and sending of the alarm. Kansas City fire fighters responded with 8 pumpers, 2 aerial ladders and a turret wagon. A backdraft explosion occurred when fire fighters with 2 charged lines forced entry in front of the building before adequate ventilation was accomplished. Fire spread throughout the building and the first and second floors collapsed before control was achieved.

Dallas, Texas, July 15. (*Photo by Jack Beers.*) An explosion occurred in a 55-gallon metal drum on the loading dock of this motor lines freight terminal. Fire spread rapidly through a 1-story brick warehouse and involved about 20 truck-trailer combinations. Open warehouse doors contributed to fire spread and approximate $47,000 fire loss.

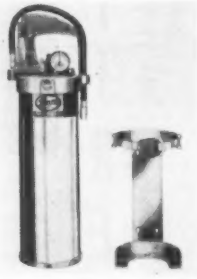
Chestertown, Maryland, July 16. (*United Press Photo.*) Fire is reported to have started in a powder drying oven in this munitions and fireworks manufacturing plant. Subsequently, 6 major explosions destroyed or damaged about twenty of the insufficiently spaced, tar paper on wood frame buildings. Eleven persons were killed and more than 40 injured. Mutual aid responded from all towns within a 40-mile radius but fire fighting and rescue operations were delayed for at least 30 minutes because of explosions, which continued for 1½ hours.

Farley, Missouri, July 10. When a break occurred in a line carrying ammonia under pressure the refrigerant was sprayed onto a gas-fired boiler. Flash fire resulted in this 1-story frame, iron clad vitamin extraction plant, and wood and combustible fibreboard interior finish led to destruction of the building within 45 minutes. Loss was estimated at $400,000.

What's New in Fire Equipment?

New Portable Pump

A new portable pump for fire fighting is being produced by Marlow Pumps of Ridgewood, New Jersey. Powered by an 8½-horse power, 4-cycle Briggs and Stratton engine, the pump is mounted on a welded steel base with spring loaded and retractable handles. It is 21⅝ in. long, 20½ in. wide, and 22 in. high, and weighs 160 pounds. According to the manufacturer, it delivers 100 gallons at 80 pounds pressure and priming is guaranteed on suction lifts up to 15 feet. An automatic check valve on the discharge end seals the discharge during priming and swings out of the way when pumping. Manufacturer states that the pump meets the requirements of NFPA No. 191 — "Portable Pumps for Fire Department Service," (available from NFPA Publications Department for 25 cents per copy). For complete information write to Marlow Pumps, Division of Bell & Gossett Company, Ridgewood, New Jersey; Longview, Texas or Moron Grove, Illinois.



Vaporizing Liquid Extinguisher

A 2-quart capacity vaporizing liquid fire extinguisher has been introduced by Pyrene Manufacturing Company, 560 Belmont Avenue, Newark 8, New Jersey. It features a new combination carrying handle and squeeze-type operating valve for easy manipulation. Recharging may be done by refilling the extinguisher with vaporizing liquid and pressurizing with a compressed air supply. The extinguisher is equipped with a liquid level glass port and an air pressure gage for quick visual inspection. The 2-qt. extinguisher has been listed by Underwriters' Laboratories and approved by Factory Mutual.

Two-Way Radio Unit

General Electric Company, Electronic Park, Syracuse, New York, has announced a new 15-watt mobile unit and a 15-watt base station for low frequency (25–50 mc) two-way radio communication. The unit may be operated from either a 6- or 12-volt power source, without additional equipment. Transmitter, receiver and power supply chassis are mounted in a completed enclosed housing which features a removable cover and side panels for ease of inspection and maintenance. While normally trunk-mounted, the unit is also available for front mount operation. Both mobile and base station combinations are available for either narrow band (20 kc. channel) or wide band (40 kc. channel) operation. Write the manufacturer for further information.

SALES HELP WANTED

Man 30 to 40 years old with general fire equipment knowledge to handle sales contact work with major fire equipment manufacturers.

Write giving full qualifications to Box XX, FIREMEN, NFPA Executive Office, 60 Batterymarch Street, Boston 10, Massachusetts. Our employees know of this ad. All replies confidential.

Laminated Wood Ladders

A new laminated wood ladder has been developed by Timber Engineering Company, 1319 Eighteenth Street, N.W., Washington, D. C., a research affiliate of the National Lumber Manufacturers Association. According to the manufacturer, one of the new ladders, composed of hickory, oak and cedar laminae, supported 1510 pounds before the outer layer broke; while a solid beam ladder broke under a load of 775 pounds in the same test conditions. Another laminated beam ladder, composed of greenheart and cedar, supported 1580 pounds in the tests. Manufacturer stated that after the outer layers broke, both laminated ladders continued to support loads more than those required by specifications. Further information may be obtained by writing to the company at the above address.

Trailer for First Aid Fire Equipment

This 2-wheel trailer of steel construction was built by Preakness Incorporated, 1060 Broad Street, Newark 2, New Jersey. Double doors at front and rear provide access to storage compartments. In this unit the front compartment contains two Chemox gas masks, a fire ax, 2 crow bars, 2 floodlights, and 2 portable hand searchlights. Rear compartment contains a 1.5 KW Homelite portable generator, a portable electric megaphone and a floodlight. Top of the trailer has a storage for eight all-purpose gas masks and additional space for other accessories.

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Put Your Fire Department's Name on These for

Fire Prevention Week

1. Poster — Red and Black 12 x 16

2. "FACTS ABOUT FIRE" 8½ x 11
4 pg. rotogravure
pictorial fact sheet

3. DISPLAY CARD 12 x 16
2 colors
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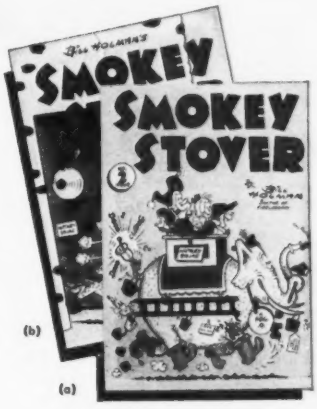
With Easel Attached

6. STICKER —
1½ x 1¼ Perforated — Use on outgoing correspondence, packages, etc.



(b)

(a)

5. FIRE COMIC BOOKS 7½ x 10
(a) 16 pages — Full color — Smokey Stover No. 2 — "Hot Tips on Child Fire Safety"
(b) 16 pages — Full color — Smokey Stover's "Hot Tips" on how to prevent fires.

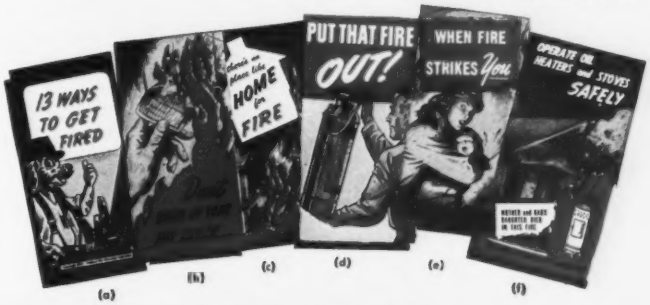
7. COLORING BOOK — Red and Black, 16 pages of outline drawings for coloring by children, with fire prevention in song and story.

4. COLORING SHEET — 8½ x 11
Sparky's Fire Prevention Week Message for Children

9. BLOTTER — Two colors 8½ x 4¾

10. FLYER — Two colors 5½ x 8½

8. INSPECTION BLANKS — 8½ x 11
A. Self-inspection form for Industrial Plants (one color)
B. Junior Firefighters Report (two colors) Home inspection blank for school distribution
C. Self-inspection blank for Merchants (one color)



(a) (b) (c) (d) (e) (f)

11. FOLDERS — In several colors 6¼ x 3¼
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Fire Prevention Week October 3-9

Be sure to order what you need before

September 22

Lots of kids will be in your fire station during Fire Prevention Week — October 3–9. Why not have some "Smokey Stover" comic books for them?

You can put many other materials to good use. The NFPA again has posters, display cards and inspection blanks designed particularly for Fire Prevention Week. You can put the name of your fire department on each piece before you distribute them.

Look at the inside back cover of this issue. Pick out everything you will need for catching attention during Fire Prevention Week.

Then fill in the quantity of each item in the order blank below. Print your name, or the name of your fire department and the address.

Be sure that your order reaches NFPA before September 22! Orders which arrive after that date cannot be mailed in time for use during Fire Prevention Week.

USE THIS EASY-ORDER BLANK TODAY

Order now to forestall transportation delays. Orders received after September 22 cannot be accepted.

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..... 1. Poster—$2.50 per 100, $17.50 per 1000.
..... 2. Facts About Fire—$2.00 per 100, $15.00 per 1000.
..... 3. Display Card—25c each, discount for quantities.
..... 4. Coloring Sheet—75c per 100, $6.00 per 1000.
..... 5. Comic Books—5c each, $45.00 per 1000.
..... (a) Smokey Stover No. 2.
..... (b) Smokey Stover.
..... 6. Sticker—15c for sheet of 50, discount for quantities.
..... 7. Coloring Book—5c each, $5.00 per 100, $45.00 per 1000.
..... 8. Inspection Blanks—8½ x 11.
..... (a) Industrial—$1.00 per 100, $7.50 per 1000.
..... (b) Home Inspection Blank—$1.00 per 100, $7.50 per 1000.
..... (c) Mercantile—$1.00 per 100, $7.50 per 1000.

QUANTITY

..... 9. Blotter—$1.50 per 100, $12.50 per 1000.
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